Apache CloudStack

Version 4.1.0

Release Notes

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作者 Apache CloudStack

Apache CloudStack is an effort undergoing incubation at The Apache Software Foundation (ASF).

Incubation is required of all newly accepted projects until a further review indicates that the infrastructure, communications, and decision making process have stabilized in a manner consistent with other successful ASF projects. While incubation status is not necessarily a reflection of the completeness or stability of the code, it does indicate that the project has yet to be fully endorsed by the ASF.

Release notes for the Apache CloudStack 4.1.0 release.

序

1. 文件常規

本指南使用了幾種常規，以强調特定文字與詞組，並著重於特定的資訊。

在 PDF 和書面版本中，本指南使用了來自於 Liberation Fonts[1] 字體組的 typefaces。倘若 Liberation Fonts 字體已安裝在您系統上的話，該字體也會被使用於 HTML 版本中。若是沒有的話，其它相等的 typefaces 便會被顯示。請注意：就預設值，Red Hat Enterprise Linux 5（與更新版本）已包含了 Liberation Fonts 字體。

1.1. 排字上的常規

有四種被用來强調特定文字與詞組的排字常規。這些常規以及它們所適用於的情況如下。

固定粗體字型（Mono-spaced Bold）

用來强調系統輸入，包括 shell 指令、檔案名稱與路徑。同時也會被使用來强調 key caps 與按鍵組合。例如：

> 若要查看位於您目前工作目錄中的 my_next_bestselling_novel 檔案的話，請在 shell 提示中輸入 cat my_next_bestselling_novel 指令並按下 Enter 來執行該指令。

以上包含了一個檔案名稱、shell 指令，以及 key cap，並且全部以固定粗體字型來顯示。

按鍵組合可透過 keycaps 藉由連字符號連接組合鍵來辨別。例如：

> 請按下 Enter 來執行指令。
>
> 請按下 Ctrl+Alt+F2 來切換至第一個虛擬終端機。按下 Ctrl+Alt+F1 來返回您的 X-Windows session。

第一段落强調了應輸入的特定 keycap。第二段落强調了兩組含有三個 keycaps 的組合鍵，各組組合鍵都是同時按下的。

若討論到原始碼的話，段落中所提及的 class 名稱、method、functions、variable 名稱與回傳值，都將會如上一般地以固定粗體字型顯示。例如：

> 和檔案相關的 class，其中包含了filesystem（檔案系統）、file（檔案）以及 dir（目錄）。各個 class 都有著與它關聯的權限組。

相稱粗體字型（Proportional Bold）

這代表在系統上所會看見的文字或詞組，這包含了應用程式名稱；對話方塊文字；被標記的按鈕；核取方塊與 radio button 標籤；選單標題以及子選單標題。例如：

> 由主選單選取系統 → 偏好設定 → 滑鼠來啓動滑鼠偏好設定。請在按鈕分頁中點選左手操作滑鼠核取方塊並按下關閉來將主要滑鼠按鍵由左邊切換至右邊（這可讓滑鼠適合以左手使用）。
>
> 若要將特殊字元插入一個 gedit 檔案中的話，請由主選單中選擇應用程式 → 附屬應用程式 → 字元對應表。接下來，請由字元對應表的選單中選擇搜尋 → 尋找…，並在搜尋

[1] https://fedorahosted.org/liberation-fonts/

欄位中輸入字元的名稱，然後按下下一步。您所選擇的字元將會顯示於字元表中。在被選定的字元上點兩下滑鼠便可將它放置在準備複製的文字欄位中，接下來請按下旁邊的複製按鈕。現在，請切換回您的文件並由 gedit 的選單上選擇編輯 → 貼上。

以上文字包含了應用程式名稱；系統全域的選單名稱與項目；應用程式特屬的選單名稱；以及在 GUI 介面中所看到的按鈕與文字全部皆以相稱粗體字型來顯示，並且可透過內文來辨別。

Mono-spaced Bold Italic（固定粗體斜體字型）或是 Proportional Bold Italic（相稱粗體斜體字型）

無論是 Mono-spaced Bold 或是 Proportional Bold，額外的斜體字型便表示可替換或是變數文字。斜體字型代表您不會照字面輸入的文字，或是會依照情況而改變的文字。比方說：

若要透過使用 ssh 來連至一部遠端機器，請在 shell 提示中輸入 ssh 用戶名稱@網域.名稱。若遠端機器為 example.com 而您在該機器上的用戶名稱為 john 的話，請輸入 ssh john@example.com。

mount -o remount 檔案系統 指令會將 named 檔案系統重新掛載。比方說，若要重新掛載 /home 檔案系統的話，該指令就會是 mount -o remount /home。

使用 rpm -q 套件 指令來查看目前已安裝套件的版本。系統將會回傳此結果：套件發行版本。

請注意以上以粗體斜體字型所表現出的文字 — 用戶名稱、網域.名稱、檔案系統、套件以及發行版本。所有文字皆為佔位符號，這可代表您提供一項指令時所輸入的文字或是系統所顯示的文字。

除了用來顯示一項作業標題這樣的標準用法，斜體字也可代表第一次使用的重要新詞彙。比方說：

Publican 是個 DocBook 發佈系統。

1.2. 引述常規

終端機輸出與原始碼資料會被設為在附近的文字間不會被看見。

傳送至終端機的輸出設置為 mono-spaced roman，並且以此方式顯示：

```
books        Desktop   documentation  drafts  mss    photos   stuff  svn
books_tests  Desktop1  downloads      images  notes  scripts  svgs
```

原始碼排列亦設置為 mono-spaced roman 不過會如下加上語法強調：

```
package org.jboss.book.jca.ex1;

import javax.naming.InitialContext;

public class ExClient
{
   public static void main(String args[])
       throws Exception
   {
      InitialContext iniCtx = new InitialContext();
      Object         ref    = iniCtx.lookup("EchoBean");
      EchoHome       home   = (EchoHome) ref;
      Echo           echo   = home.create();

      System.out.println("Created Echo");

      System.out.println("Echo.echo('Hello') = " + echo.echo("Hello"));
   }
}
```

1.3. 註解和警告

最後，我們將使用三種視覺上的形式，來强調可能會被遺漏掉的資訊。

註解

註解代表某些作業上的提示、捷徑或是其它完成方式。忽略註解並不會帶來太大的負面影響，不過您可能會忽略掉某些能夠較輕鬆完成工作的方式。

重點

重點方塊會將容易遺漏掉的項目詳細列出：只對應於當下 session 的配置變更，或是某些要套用更新前必須將之重新啓用的服務。倘若您忽略掉重點方塊，雖然不會造成資料遺失，不過卻會造成工作上的不便與其它影響。

警告

任何警告都不該被忽略掉。忽略警告則很有可能會造成資料上的遺失。

2. Submitting Feedback and Getting Help

If you find a typographical error in this manual, or if you have thought of a way to make this manual better, we would love to hear from you! Please submit a bug: https://issues.apache.org/jira/browse/CLOUDSTACK against the component Doc.

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, please include the section number and some of the surrounding text so we can find it easily.

Better yet, feel free to submit a patch if you would like to enhance the documentation. Our documentation is, along with the rest of the CloudStack source code, kept in the project's git repository.

The most efficient way to get help with CloudStack is to ask on the mailing lists.

The Apache CloudStack project has mailing lists for users and developers. These are the official channels of communication for the project and are the best way to get answers about using and contributing to CloudStack. It's a good idea to subscribe to the users@cloudstack.apache.org mailing list if you've deployed or are deploying CloudStack into production, and even for test deployments.

The CloudStack developer's mailing list (dev@cloudstack.apache.org) is for discussions about CloudStack development, and is the best list for discussing possible bugs in CloudStack. Anyone contributing to CloudStack should be on this mailing list.

To posts to the lists, you'll need to be subscribed. See the CloudStack Web site[2] for instructions.

[2] http://cloudstack.apache.org/mailing-lists.html

Welcome to CloudStack 4.1

Welcome to the 4.1.0 release of CloudStack, the first major release from the Apache CloudStack project since its graduation from the Apache Incubator.

This document contains information specific to this release of CloudStack, including upgrade instructions from prior releases, new features added to CloudStack, API changes, and issues fixed in the release. For installation instructions, please see the Installation Guide[1]. For usage and administration instructions, please see the CloudStack Administrator's Guide[2]. Developers and users who wish to work with the API will find instruction in the CloudStack API Developer's Guide[3]

If you find any errors or problems in this guide, please see 節 2, “Submitting Feedback and Getting Help” . We hope you enjoy working with CloudStack!

[1] http://cloudstack.apache.org/docs/en-US/Apache_CloudStack/4.1.0/html/Installation_Guide/index.html
[2] http://cloudstack.apache.org/docs/en-US/Apache_CloudStack/4.1.0/html/Admin_Guide/index.html
[3] http://cloudstack.apache.org/docs/en-US/Apache_CloudStack/4.0.1-incubating/html/API_Developers_Guide/index.html

Compatibility Matrix for 4.1.0

CloudStack is tested against certain operating systems, hypervisors, and other components to ensure that it works on specific platforms. It may work well on other platforms, but the platforms listed below are the ones we specifically test against and are more likely to be able to help troubleshoot if you run into any issues.

2.1. Supported Operating Systems

This section lists the operating systems that are supported for running CloudStack's Management Server.

Note that we test against specific versions of the OSes, so compatibility with CentOS 6.3 may not indicate compatibility with CentOS 6.2, etc.

- CentOS 6.3
- Red Hat Enterprise Linux 6.3
- Ubuntu 12.04 LTS

2.2. Supported Hypervisors

CloudStack supports three hypervisor families, Xen with XAPI, KVM, and VMware with vSphere.

- CentOS 6.2 with KVM
- Red Hat Enterprise Linux 6.2 with KVM
- XenServer 6.0.2 (with Hotfix)
- XenServer 6.1
- VMware vSphere/Vcenter 5.1

Bare Metal Support

Bare metal support is not present in this release.

2.3. Supported Browsers

The CloudStack Web-based UI should be compatible with any modern browser, but it's possible that some browsers will not render portions of the UI reliably, depending on their support of Web standards. For best results, we recommend one of the following browsers.

- Internet Explorer 8
- Firefox 10+
- Chrome
- Safari

Note that it's difficult to confirm specific browser versions for Firefox and Google Chrome, given the speed of their update cycle.

2.4. External Devices

The following external devices are supported in CloudStack 4.1.0.

- F5: 10.1.10 (Build 3341.1084)
- SRX model srx100b: Must be 10.3 or higher -10.4R7.5
- Netscaler VPX 9.3, 10.0(Build 54.7.nc and 54.161)
- Netscaler MPX 10
- Netscaler SDX 10

Version 4.1.0

3.1. What's New in 4.1

Apache CloudStack 4.1.0 includes many new features. This section covers the most prominent new features and changes.

3.1.1. Localization

The 4.1.0 release adds partial User Interface (UI) support for Catalan, Chinese, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, and Spanish. Not all languages are complete.

The 4.1.0 release also adds documentation translations for Chinese, Chinese (Taiwan), Italian, Japanese, Korean, and Portuguese.

3.1.2. Added Region Support

CLOUDSTACK-241[1]: This feature adds a "region" construct that spans several management servers. The objective of this feature is to add AWS EC2 like Regions implementation into CloudStack. Regions are dispersed and located in separate geographic areas. Availability Zones (or Zones in CloudStack) are distinct locations within a Region that are engineered to be isolated from failures in other Zones and provide inexpensive, low latency network connectivity to other Zones in the same Region.

Regions are expected to add the following benefits

- Higher availability of the services: users can deploy services across AZs and even if one of the AZ goes down the services are still available to the end-user through VMs deployed in other zones.
- Higher availability of the Management Server (MS): Since each MS Cluster only manages a single Region, if that MS Cluster goes down, only that particular Region is impacted. Admin should be able to access all the other Regions.
- Scalability: The scalability limit of CloudStack dramatically improves, as the scalability limit of MS Cluster is limited to a single Region.
- Object Store: With Regions construct, CloudStack would also allow users to define Object Store (Secondary Storage) across AZs. This helps users easily deploy VMs in different AZs using the same template, offerings.
- Geographical Grouping: Regions allow admins to group AZs (that have low latency and are geographically located nearby) into a broader region construct.

Currently the Region feature is exposed in the API, but does not have a UI component.

[1] https://issues.apache.org/jira/browse/CLOUDSTACK-241

3.1.3. Support for EC2 Query API

CLOUDSTACK-197[2]: This introduces a query API for the AWS APIs that are currently only supported by SOAP. The AWS Java SDK and AWS PHP SDK should now be supported by the AWSAPI in CloudStack.

Supported Query APIs in 4.1.0:

- AllocateAddress
- AssociateAddress
- AttachVolume
- AuthorizeSecurityGroupIngress
- CreateImage
- CreateKeyPair
- CreateSecurityGroup
- CreateSnapshot
- CreateTags
- CreateVolume
- DeleteKeyPair
- DeleteSecurityGroup
- DeleteSnapshot
- DeleteTags
- DeleteVolume
- DeregisterImage
- DescribeAddresses
- DescribeAvailabilityZones
- DescribeImageAttribute
- DescribeImages
- DescribeInstanceAttribute
- DescribeInstances
- DescribeKeyPairs
- DescribeSecurityGroups
- DescribeSnapshots

[2] https://issues.apache.org/jira/browse/CLOUDSTACK-197

- DescribeTags
- DescribeVolumes
- DetachVolume
- DisassociateAddress
- GetPasswordData
- ImportkeyPair
- ModifyImageAttribute
- RebootInstances
- RegisterImage
- ReleaseAddress
- ResetImageAttribute
- RevokeSecurityGroupIngress
- RunInstances
- StartInstances
- StopInstances
- TerminateInstances

See the Feature Specification[3] for more information on the Query API support.

3.1.4. Auto-Completing Shell for CloudStack (CloudMonkey)

CLOUDSTACK-132[4]: Adds a auto-completing shell and command-line tool for CloudStack written in Python, called CloudMonkey.

CloudMonkey includes the following features:

- Usable as a command line tool and interactive shell.
- All commands are lowercase unlike API.
- Api Discovery using sync feature, with build time api precaching for failsafe sync.
- Raw api execution support.
- Auto-completion via double tab.
- Reverse search using Ctrl+R
- Emacs compatible key bindings.
- Output that's "pipeable" to other *nix programs.

[3] https://cwiki.apache.org/CLOUDSTACK/ec2-functional-spec-for-query-api-support.html
[4] https://issues.apache.org/jira/browse/CLOUDSTACK-132

- Unix shell execution.
- Support to handle asynchronous jobs using user defined blocking or non-blocking way.
- Tabular or JSON output with filtering of table columns.
- Colored output.
- API parameter value completion (based on predication, fuzzy results may fail sometimes).

CloudMonkey has a few requirements above and beyond CloudStack, and does not need to be run on the same machine as a management server. If you wish to run CloudMonkey you'll need Python 2.5 or later, readline, Pygments, and prettytable. CloudMonkey can be installed with pip:

```
$ pip install cloudmonkey
```

See the Developer's Guide and the CloudStack wiki[5] for the latest information on CloudMonkey installation and use.

3.1.5. API Discovery Service

CLOUDSTACK-926[6]: CloudStack has more than 300 APIs and more are added in each major release. CloudStack admins can enable or disable APIs, or add plugins which provide more APIs. The API Discovery Service is a plugin which will help users discover the APIs available to them on a CloudStack Management Server.

The discovery service implements a method called listApis which will return information about APIs for a user. It currently accepts an apiName to list api information of that particular API. The method ensures that user can only list APIs they are entitled to.

All CloudStack APIs are implemented by annotated command class and PluggableService is a contract implemented by all the components such as the Management Server and all the plugins which provide an API. During load time, API discovery service asks all the pluggable services to return list of API cmd classes from whose fields and annotations it gathers information about each API, the information consists of name, description, parameter name, parameter description, etc.

For more information on the implementation of the API Discovery Service for 4.1.0, see the CloudStack wiki[7].

3.1.6. Events Framework

CLOUDSTACK-820[8]:The event notification framework provides a means for the Management Server components to publish and subscribe to CloudStack events. Event notification is achieved by implementing the concept of event bus abstraction in the Management Server. An event bus is introduced in the Management Server that allows the CloudStackcomponents and extension plug-ins to subscribe to the events by using the Advanced Message Queuing Protocol (AMQP) client. In CloudStack, a default implementation of event bus is provided as a plug-in that uses the RabbitMQ AMQP client. The AMQP client pushes the published

[5] https://cwiki.apache.org/CLOUDSTACK/cloudstack-cloudmonkey-cli.html
[6] https://issues.apache.org/jira/browse/CLOUDSTACK-926
[7] https://cwiki.apache.org/CLOUDSTACK/api-discovery-service.html
[8] https://issues.apache.org/jira/browse/CLOUDSTACK-820

events to a compatible AMQP server. Therefore all the CloudStack events are published to an exchange in the AMQP server.

A new event for state change, resource state change, is introduced as part of Event notification framework. Every resource, such as user VM, volume, NIC, network, public IP, snapshot, and template, is associated with a state machine and generates events as part of the state change. That implies that a change in the state of a resource results in a state change event, and the event is published in the corresponding state machine on the event bus. All the CloudStack events (alerts, action events, usage events) and the additional category of resource state change events, are published on to the events bus.

See the Events Framework section of the Admin Guide for more information on using the events framework.

3.1.7. L3 Router Functionality in Nicira NVP Plugin

CLOUDSTACK-726[9]: Adds on work done in CloudStack 4.0.x series to add support for the Nicira Network Virtualization Platform (NVP). The 4.0.x releases added L2 (data link layer) support for NVP, but L3 (network layer) support was missing.

With 4.1.0, CloudStack adds support for the following features:

- L3 Routing (Gateway)
- Source NAT
- Static NAT
- Port Forwarding

3.1.8. Persistent Networks without Running VM

CLOUDSTACK-706[10]: Prior to CloudStack 4.1.0, a network had to have at least one instance (VM) running to actually deploy a network. In 4.1.0, we add the ability to deploy physical network devices without having a instance (VM) running on that network.

One use case for this is creating a Virtual Private Cloud (VPC) with a tier consisting only of physical devices. For example, you might create a VPC for a three-tier application, deploy VMs for Web and Application tier, and use physical machines for the Database tier. Another use case is that if you are providing services by using physical hardware, you can define the network as persistent and therefore even if all its VMs are destroyed the services will not be discontinued.

See the Persistent Networks section in the Admin Guide for more on this feature.

3.1.9. Add/Remove Network on VM

CLOUDSTACK-645[11]: provides the ability to move VMs between networks and reconfigure a VM's network. You can remove a VM from a physical network and add to a new physical network. You can also change the default physical network of a virtual machine. With this functionality, hybrid or traditional server loads can be accommodated with ease.

[9] https://issues.apache.org/jira/browse/CLOUDSTACK-726
[10] https://issues.apache.org/jira/browse/CLOUDSTACK-706
[11] https://issues.apache.org/jira/browse/CLOUDSTACK-645

This feature is supported on XenServer and KVM hypervisors.

The following APIs have been added to support this feature. These API calls can function only while the VM is in running or stopped state:

- addNicToVirtualMachine
- removeNicFromVirtualMachine
- updateDefaultNicForVirtualMachine

See the Developer's Guide for more on using the new APIs.

3.1.10. Resize Volumes Feature

CLOUDSTACK-644[12]: With 4.1.0 CloudStack now provides the ability to resize data disks. Volumes within the disk offerings with the same storage tag can be resized. For example, if you only want to offer 10GB, 50GB, and 100GB offerings, the allowed resize should stay within those limits. That implies if you define a 10GB, a 50GB and a 100GB disk offerings, a user can upgrade from 10GB to 50GB, or 50GB to 100GB. If you create a custom-sized disk offering, then you have the option to resize the volume by specifying a new, larger size.

This feature is supported on KVM, XenServer, and VMware hosts. However, shrinking volumes is not supported on VMware hosts.

Using the resizeVolume API, a data volume can be moved from a static disk offering to a custom disk offering with the size specified. This functionality allows those who might be billing by certain volume sizes or disk offerings to stick to that model, while providing the flexibility to migrate to whatever custom size necessary.

3.1.11. Autoscale

CLOUDSTACK-637[13]: AutoScaling allows you to scale your back-end services or application instances up or down automatically according to the conditions you define. With AutoScaling enabled, you can ensure that the number of instances you are using seamlessly scale up when demand increases, and automatically decreases when demand subsides.

Conditions for triggering a scaleup or scaledown action can vary from a simple use case like monitoring the CPU usage of a server to a complex use case of monitoring a combination of server's responsiveness and its CPU usage. For example, you can configure AutoScaling to launch an additional instance whenever CPU usage exceeds 80 percent for 15 minutes, or to remove a VM whenever CPU usage is less than 20 percent for 30 minutes.

AutoScale is supported on NetScaler Release 10 Build 73.e and beyond.

3.1.12. API Request Throttling

CLOUDSTACK-618[14]: Limits the number of API requests per second that can be placed against a management server to avoid DoS attacks via API requests.

[12] https://issues.apache.org/jira/browse/CLOUDSTACK-644
[13] https://issues.apache.org/jira/browse/CLOUDSTACK-637
[14] https://issues.apache.org/jira/browse/CLOUDSTACK-618

The throttling is controlled by the api.throttling.enabled, api.throttling.interval, and api.throttling.max configuration settings. Note that api.throttling.enabled is set to false by default.

3.1.13. S3 Backed Secondary Storage

CLOUDSTACK-509[15]: This enhancement backs NFS secondary storage with an S3-compatible object store. Periodically, a reaper thread synchronizes the templates, ISOs, and snapshots stored on a NFS secondary storage mount with a configured S3 object store. In addition to permitting the use of commodity or IaaS storage solutions for static assets, it provides a means of automatically synchronizing template and ISO assets across multiple zones.

See the CloudStack wiki[16] for more information on this feature, currently the documentation is incomplete[17].

3.1.14. User and Domain Admin Can Create API Key and Secret

CLOUDSTACK-437[18]: This feature adds the ability for domain admins and users to create their own API Key and Secret. Domain admins can create keys for themselves, subdomain admins, and for regular users, but not for other domain admins.

3.1.15. Support Inline Mode for F5 and SRX

CLOUDSTACK-306[19]: For CloudStack deployments using the Juniper SRX (firewall) and F5 Big IP (load balancer), CloudStack 4.1.0 supports putting the firewall in front of the load balancer, making the firewall device the gateway and putting the load balancer behind the public network.

3.1.16. Egress Firewall Rules for Guest Networks

CLOUDSTACK-299[20]: This feature allows users to create egress (exit) traffic rules from private networks to public networks (e.g. from your internal network to the public Internet). By default all traffic is blocked from internal networks to the public networks, this allows you to open ports as necessary.

Egress traffic rules are suppored only on virtual routers at this time, physical devices are not supported.

3.1.17. Reset SSH Key to Access VM

CLOUDSTACK-297[21]: CloudStack 4.1.0 introduces a new API resetSSHKeyForVirtualMachine, that can allow them to set or reset the SSH keypair assigned to a virtual machine.

[15] https://issues.apache.org/jira/browse/CLOUDSTACK-509
[16] https://cwiki.apache.org/CLOUDSTACK/s3-backed-secondary-storage.html
[17] https://issues.apache.org/jira/browse/CLOUDSTACK-878
[18] https://issues.apache.org/jira/browse/CLOUDSTACK-437
[19] https://issues.apache.org/jira/browse/CLOUDSTACK-306
[20] https://issues.apache.org/jira/browse/CLOUDSTACK-299
[21] https://issues.apache.org/jira/browse/CLOUDSTACK-297

3.2. Issues Fixed in 4.1.0

Apache CloudStack uses Jira[22] to track its issues. All new features and bugs for 4.1.0 have been tracked in Jira, and have a standard naming convention of "CLOUDSTACK-NNNN" where "NNNN" is the issue number.

This section includes a summary of known issues against 4.0.0 that were fixed in 4.1.0. Approximately 470 bugs were resolved or closed in the 4.1.0 cycle.

瑕疵	敘述
CLOUDSTACK-46	Remnants of mycloud remain.
CLOUDSTACK-70	Improve Network Restart Behaviour for Basic Zone: Restarting Network Fail
CLOUDSTACK-94	"API command, listIsos documentation clarity
CLOUDSTACK-95	IP address allocation not working when a user tries to allocate IP addresses in a Project
CLOUDSTACK-97	Vmware network labels are ignored when creating a Zone using basic networking
CLOUDSTACK-108	VM should not be allowed to be deployed on two Isolated Networks of an Account that were created from DefaultNetworkOfferingwithSourceNATService
CLOUDSTACK-118	Status of host resorce stuck in "ErrorInMaintenance"
CLOUDSTACK-119	Move Agent-Simulator in to the hypervisor plugin model
CLOUDSTACK-130	Clarify docs on tags parameter in API reference
CLOUDSTACK-152	Routes on the User VM are programmed incorrectly on a VM present on both Isolated and Shared Guest Network
CLOUDSTACK-178	Expose name parameter of VM in list Vm view.
CLOUDSTACK-198	vpn:failto add VPN Users deletes all the existing Vpn user
CLOUDSTACK-222	Admin UI prompts to restart Management server with cancel edit operation
CLOUDSTACK-225	API Docs: Request params repeated with different description
CLOUDSTACK-226	UpdatePhysicalNetworkcommand failed due to java.sql.BatchUpdateException ; Tried to extend the existing Guest VLAN Range of one physical network into the Guest VLAN range of the other physical network
CLOUDSTACK-227	ReconnectHostCmd: NullPointerException: Unable to get host Information for XenServer 6.0.2 host - on intentionally changing the traffic labels on the physical network
CLOUDSTACK-228	UI provides an option to reconnect a disconnected host - ServerApiException is thrown on an attempt
CLOUDSTACK-232	Zone infrastructure chart -- disable resource total display
CLOUDSTACK-235	Network rate can be set in 2 places. Clarify docs on how this works

[22] https://issues.apache.org/jira/browse/CLOUDSTACK

瑕疵	敘述
CLOUDSTACK-249	Add host id to failed VM deploy alerts
CLOUDSTACK-250	Incorrect description of maintenance mode in admin guide
CLOUDSTACK-256	"vpn:As an admin user, not able to delete VPN user which is present in a regular user's network.
CLOUDSTACK-271	updatePhysicalNetwork dies with an NPE when the vlan range is empty
CLOUDSTACK-274	Two error codes mapped to same value in API
CLOUDSTACK-275	hostid not always a UUID
CLOUDSTACK-277	Message during CloudStack management server Installation: cannot access /usr/share/cloud/bridge/lib: No such file or directory
CLOUDSTACK-279	deleteProject fails when executed by the regular user (works fine for root/domain admin)
CLOUDSTACK-284	listVirtualMachines does not return deleted machines when zone is specified
CLOUDSTACK-290	3.0.0 template also needed for 2.2.14 to 3.0.5 direct upgrade.
CLOUDSTACK-293	"We do awful, hacky things in our spec file for client"
CLOUDSTACK-304	Add synchronization for createSnapshot command per host basis
CLOUDSTACK-309	iptables rules being deleted from wrong VM after a migration
CLOUDSTACK-318	Adding XenServer Host Fails - 6.0.2 fails with 4.0.0
CLOUDSTACK-320	"sessionKey query parameter should be case-insensitive, now only sessionkey is accepted"
CLOUDSTACK-322	During upgrade displays error - a foreign key constraint fails (`cloud/#sql-f34_6e`..
CLOUDSTACK-332	"count" property in list* API response should be equal to how many entries in database, not how many objects in API response
CLOUDSTACK-333	When Datacenter name in VCenter has spaces Primary Storage (VMFS) discovery will fail
CLOUDSTACK-335	KVM VPC load balancer not working
CLOUDSTACK-336	listZones doesn't honour paging
CLOUDSTACK-343	"Document what tools and packages are required to build, package and install CloudStack 4.0
CLOUDSTACK-346	Cannot add Vmware cluster with class loader conflict exception
CLOUDSTACK-347	listNetworks API: return vlan information only when the caller is ROOT admin
CLOUDSTACK-348	deleteNetwork does not clean up network resource count correctly
CLOUDSTACK-354	Display of storage statistics is wrong

瑕疵	敘述
CLOUDSTACK-355	"Fix ""count"" in a bunch of API commands
CLOUDSTACK-357	"ISOs can be deleted while still attached to a running VM, and they subsequently cannot be detached from a running VM
CLOUDSTACK-359	PropagateResourceEventCommand failes in cluster configuration
CLOUDSTACK-361	Wrong creation of guest networks on a KVM host in Multiple Physical Networks with guest traffic
CLOUDSTACK-364	Docs point to download.cloud.com for AWS API script
CLOUDSTACK-368	OVM - cannot create guest VM
CLOUDSTACK-369	ASF 4.0 - unable to support XenServer 6.1 host
CLOUDSTACK-373	"static NAT and Firewall is not working on external firewall device SRX, it needs to be implemented
CLOUDSTACK-377	provide deployment config access to marvin's testcase
CLOUDSTACK-378	mavenize marvin on master
CLOUDSTACK-390	Install Guide: Section 4.5.7 (Prepare the System VM Template): Links go to cloud.com
CLOUDSTACK-397	Install Guide: Section 11.1 (Guest Traffic): Diagram is the wrong diagram
CLOUDSTACK-398	Install Guide: Section 11.17.3 (Using VPN with Mac OSX): Not complete
CLOUDSTACK-404	Update docs on the usage of cloud-setup-database
CLOUDSTACK-412	Data truncation: Out of range value for column 'ram' at row
CLOUDSTACK-415	restartNetwork call causes VM to be unreachable when Nicira based SDN is used
CLOUDSTACK-416	XCP 1.6beta2 (61002c) - can't add a host
CLOUDSTACK-417	Handle password server securely to run on port 8080 on VR
CLOUDSTACK-424	Updated userdata not propagating to the VR
CLOUDSTACK-427	Change hardcoded step number references to dynamic link
CLOUDSTACK-428	Storage capacity shown in UI is incorrect
CLOUDSTACK-435	Vmware network labels are ignored when creating a Zone using basic networking
CLOUDSTACK-441	Running mgmt server using jetty fails to start api server
CLOUDSTACK-446	"Host going to alert state, if you are adding already added host
CLOUDSTACK-448	SSVM bootstrap failure on XenServer hosts with E3 CPU
CLOUDSTACK-456	License tag in SPEC isn't what RPM is expecting
CLOUDSTACK-459	[Optional Public IP assignment for EIP with Basic Zone] Associate IP Checkbox in Create Network Offering Dialog is Displayed When Elastic LB is Selected
CLOUDSTACK-462	A few corrections to make to the 4.0.0 installation guide
CLOUDSTACK-464	"Regression in AWSAPI docs, entire sections removed

瑕疵	敘述
CLOUDSTACK-465	French language file quotes are dropping javascript syntax error
CLOUDSTACK-467	Developer's Guide points to cloud.com for API reference
CLOUDSTACK-479	UpdateVirtualMachine api fails to propagate userdata to domr
CLOUDSTACK-481	Installation Guide Doc Error
CLOUDSTACK-493	2.2.x-3.0 DB upgrade support for Advance SG enabled network
CLOUDSTACK-499	cloudmonkey CLI can't accept complex parameter
CLOUDSTACK-500	Passwd-server iptables rules are dropped on domr on fresh start or on reboot.
CLOUDSTACK-501	Apidocs and marvin does not know how to handle Autoscaling docs.
CLOUDSTACK-504	Duplicate guest password scripts in codebase.
CLOUDSTACK-507	fix api docs for listSSHKeyPair
CLOUDSTACK-508	CLVM copies template to primary storage unnecessarily.
CLOUDSTACK-510	Add button not visible when adding public IPs to physical network.
CLOUDSTACK-514	Marvin and Cloudmonkey don't work when an API target uses https or an alternate path.
CLOUDSTACK-518	API refactoring -- change @Parameter annotation and remove the @IdentityMapper annotation.
CLOUDSTACK-520	Dependency jar names mismatch with install-non-oss.sh
CLOUDSTACK-521	Build will hung up when doing test for TestAgentShell
CLOUDSTACK-522	Log requests in cloudmonkey's log file.
CLOUDSTACK-527	List API performance optimization by using DB views and removing UUID conversion.
CLOUDSTACK-534	Failed to add host
CLOUDSTACK-536	remove citrix cloudpatform from 4.0 build - CloudStack is ASF project.
CLOUDSTACK-539	Cropped Text in UI under Quick View.
CLOUDSTACK-552	]Quick view details for a volume displays scroll bar in place of name of the volume when the name of the volume has more no of characters.
CLOUDSTACK-553	"SRX - When adding SRX device make "Public Network" - default to "untrusted" and "Private Network" - default to "trusted" as un-editable fields.
CLOUDSTACK-556	Erratic window behavior in Quick View tooltip.
CLOUDSTACK-559	source code import problem
CLOUDSTACK-560	Usage server doesn't work in 4.0.0 due to missing db changes
CLOUDSTACK-572	SG Enabled Advanced Zone - Not able to deploy a VM in an account specific shared network

瑕疵	敘述
CLOUDSTACK-573	"NPE at ""com.cloud.network.NetworkManagerImpl.networkOfferingIsConfiguredForExternalN when create network from the network offering having NULL provider for the service
CLOUDSTACK-578	The already deleted same hostname is not deleted from /etc/hosts of vRouter
CLOUDSTACK-584	"typos in ""Apache_CloudStack-4.0.0-incubating-CloudStack_Nicira_NVP_Guide-en-US""
CLOUDSTACK-590	Incorrect Network Gateways Assigned to System VM
CLOUDSTACK-592	"API bloat, unknown apis cmd classes
CLOUDSTACK-593	"2 guest network, auto create vlan error
CLOUDSTACK-596	DeployVM command takes a lot of time to return job id.
CLOUDSTACK-599	DhcpEntryCommand fails on Router VM on CS4.0 and vSphere5 with Advanced Network Zone.
CLOUDSTACK-600	When rebooting KVM local storage VM host, libvirt definitions deleted
CLOUDSTACK-605	Host physical CPU is incorrectly calculated for Vmware host
CLOUDSTACK-606	Starting VM fails with 'ConcurrentOperationException' in a clustered MS scenario
CLOUDSTACK-614	"ListTemplates API is not returning ""Enable SSH Key"" attribute for any given template
CLOUDSTACK-617	Unable to edit a Sub domain
CLOUDSTACK-639	API Refactoring: Adapters for ACL
CLOUDSTACK-648	The normal users could change their own login password.
CLOUDSTACK-660	Network Traffic Labels are not functional in Marvin
CLOUDSTACK-683	Image Is Missing in the Accessing VM Section
CLOUDSTACK-689	RVR: Stop pending flag is not cleared when user start the disconnected router from another host
CLOUDSTACK-691	A warning dialog box shows after reloading the welcome page.
CLOUDSTACK-693	Adding a VPC virtual router to a NiciraNVP enabled network fails.
CLOUDSTACK-694	"Create a new VPC network offering with "connectivity" option needed for SDN networking) is not allowed / VPC support for SDN networks
CLOUDSTACK-717	cloudmonkey fails to parse/print response.
CLOUDSTACK-720	Fail to load a png image when accessing the web console.
CLOUDSTACK-721	Bytes sent/received in user statistics is empty (CloudStack 4.0)
CLOUDSTACK-725	UI: Error when the Egress rules tab is selected for a network.
CLOUDSTACK-734	api_refactoring: CreateAccountCmd fails to send response due to NPE in service layer

瑕疵	敘述
CLOUDSTACK-735	Integration smoke tests: Fix expunge vm test on api_refactoring
CLOUDSTACK-736	Integration smoke tests: Fix check for vm name for the deployvm smoke test.
CLOUDSTACK-793	"Create cloudmonkey-helper, a plugin that helps autodiscover and sync api info via an api over some endpoint
CLOUDSTACK-798	Move usage related cmd classes from cloud-server to cloud-api
CLOUDSTACK-799	[Load Test] Check router statistics falls behind in gathering stats by more than 2 times the set value
CLOUDSTACK-819	Create Account/User API logging password in access log
CLOUDSTACK-863	Non-printable characters (ASCII control character) such as %00 or %0025 are getting stored in raw/non encoded form in the database
CLOUDSTACK-870	Client UI: Wrong character encoding for some language
CLOUDSTACK-928	[Simulator] Latency for Agent Commands - change unit of wait from seconds to milliseconds
CLOUDSTACK-938	s2s VPN trouble
CLOUDSTACK-959	Missing sub-sections in document section System Service Offering
CLOUDSTACK-968	marvin: vlan should be an attribute of the physical_network and not the zone
CLOUDSTACK-977	Document how to use openvswitch with KVM hypervisor
CLOUDSTACK-978	TypeError: instance.displayname is undefined while adding VM's to the LB rule
CLOUDSTACK-985	Different MAC address for RvR caused issue in short term network outage
CLOUDSTACK-987	Sections missing in Working With Snapshots
CLOUDSTACK-993	"admin"" user is not getting created when management server is started.
CLOUDSTACK-995	Not able to add the KVM host
CLOUDSTACK-1002	Not able to start VM
CLOUDSTACK-1006	need to disable service libvirt-guests in CentOS packaging RPMs, or in installation docs
CLOUDSTACK-1008	"Egress"" tab should not be presented in the UI for Shared Networks
CLOUDSTACK-1010	Host count and Secondary storage count always shows 1 in UI
CLOUDSTACK-1011	KVM host getting disconnected in cluster environment
CLOUDSTACK-1013	running cloudstack overwrites default public/private ssh key
CLOUDSTACK-1014	Merge ManagementServer and ManagementServerEx
CLOUDSTACK-1016	Not able to deploy VM

瑕疵	敘述
CLOUDSTACK-1021	the vlan is not creat to right nic. when i creat multi guest network
CLOUDSTACK-1024	Regression: Unable to add Xenserver host with latest build.
CLOUDSTACK-1027	"Update SSL certificate" button should properly reflect its functionality
CLOUDSTACK-1029	Enter the token to specified project is malfunctioned
CLOUDSTACK-1037	"Make cloudmonkey awesome-er: Online help docs and api discovery, better colored output, parameter value autocompletion
CLOUDSTACK-1050	No Documentation on Adding a Load Balancer Rule
CLOUDSTACK-1051	API dispatcher unable to find objectVO corresponding to DeleteTemplatecmd
CLOUDSTACK-1055	"The overlay still exists when the ""Recurring Snapshots"" dialog is canceled by pressing esc key.
CLOUDSTACK-1056	S3 secondary storage fails to upload systemvm template due to KVMHA directory
CLOUDSTACK-1057	regression of changeServiceForVirtualMachine API - fails to find service offering by serviceOfferingId parameter
CLOUDSTACK-1063	"SG Enabled Advanced Zone - "Add Guest Networks" - When user tries to add a guest Network with scope as "Account" he should NOT be presented with "Offering for shared security group enabled"
CLOUDSTACK-1064	A type error occurs when trying to add account/register template...
CLOUDSTACK-1068	Names in VR list is useless
CLOUDSTACK-1070	javelin: NPE on executing registerIso API
CLOUDSTACK-1071	Netscaler element is not getting loaded as part of LoadBalancing Service Providers
CLOUDSTACK-1078	Not able to start System Vms on Rhel 6.3 KVM host
CLOUDSTACK-1079	Deploying AWSAPI with mvn -pl :cloud-awsapi jetty:run fail
CLOUDSTACK-1082	UI doesn't throw any error message when trying to delete ip range from a network that is in use.
CLOUDSTACK-1083	listUsageRecords api: removed project results in NPE
CLOUDSTACK-1087	Update the Developer Guide for ASFCS 4.1 Release
CLOUDSTACK-1088	EnableStaticNat error will clear the data in database
CLOUDSTACK-1094	Ipv6 - hostname/hostname --fqdn does not return the name of the VM. But i am able to reach the Vm using their names
CLOUDSTACK-1095	Ipv6 - dhclient command needs to be run manually on the Vms to get the Ipv6 address
CLOUDSTACK-1100	Expunge thread is not kicked off based on global configuration if the global setting is less than 60 seconds
CLOUDSTACK-1103	"IpV6 - listNetwork() command does not retrun gateway,netmask,cidr

瑕疵	敘述
CLOUDSTACK-1104	Ipv6 - listVlanIpRanges() returns error 530
CLOUDSTACK-1105	"IpV6 - listVirtualMachines() does not return netmask, gateway,ipaddress.
CLOUDSTACK-1107	Ipv6 - Unable to extend Ip range for a Ipv6 network using craeteVlanIpRange() command - Error code 530 returned
CLOUDSTACK-1108	Ipv6 - Not able to restart Networks
CLOUDSTACK-1109	"Ipv6 - Unable to expunge User Vms that are "Destroyed".
CLOUDSTACK-1111	Ipv6 - listRouters() does not return guestipaddress/
CLOUDSTACK-1112	"Errors in "Prepare the System VM Template"
CLOUDSTACK-1113	"Ipv6 - Not able to deploy a new VM in this network because of "Unable to allocate Unique Ipv6 address"
CLOUDSTACK-1114	unable to execute listegressfirewallrules API due invalid value id
CLOUDSTACK-1115	In multiple shared network unable to login with default nic - KVM
CLOUDSTACK-1123	ListStoragePools API broken by refactor
CLOUDSTACK-1138	"Providing invalid values for gateway, netmask etc in the zoneWizard blocks the VLAN container to load, throwing an error
CLOUDSTACK-1139	"After the Vm is "Expunged" we see the entry still being present in the router in /etc/dhcphosts.txt
CLOUDSTACK-1141	"Ipv6 - After network restart (and reboot router), we do not see the existing vms dnsentries not being programmed in the router.
CLOUDSTACK-1152	Missing tag in host-add.xml
CLOUDSTACK-1153	"Ipv6 - Vm deployment fails with "n must be positive" error.
CLOUDSTACK-1154	Account/Users related API failed due to RegionService inject exception.
CLOUDSTACK-1157	No API Documentation on Listing Custom User Templates Using CS4 API
CLOUDSTACK-1160	References to version=3.0.3|4|5|6 in API classes needs to be removed.
CLOUDSTACK-1161	Differences between 4.1 and master in ongoing-config-of-external-firewalls-lb.xml
CLOUDSTACK-1163	Failed with NPE while creating firewall rule
CLOUDSTACK-1168	Create firewall rule broke
CLOUDSTACK-1173	ConsoleProxyResource instantiation exception.
CLOUDSTACK-1174	Snapshots related SQL error.
CLOUDSTACK-1176	Issue with snapshots(create/list)
CLOUDSTACK-1181	mvn deploy db failing with NPE
CLOUDSTACK-1190	Make APIChecker interface throw a single sensible exception.

瑕疵	敘述
CLOUDSTACK-1200	"Unknown column 'vm_instance.disk_offering_id' in table vm_instance, db exception shown in MS log
CLOUDSTACK-1201	"Failed to create ssh key for user "cloud" /var/lib/cloud/management/.ssh/id_rsa and failed to start management server
CLOUDSTACK-1202	Fail to install KVM cloud-agent.
CLOUDSTACK-1203	Fail to create advance zone with SG enabled when UI allows SG enabled option.
CLOUDSTACK-1204	Fail to create advance zone due to fail to add host
CLOUDSTACK-1205	Ipv6 - Ubuntu 12.10 guest Vms loses default route (after it expiration time ~ 30 mts) when ipv6.autoconfig parameters are disabled except for net.ipv6.conf.lo.autoconf which is enabled.
CLOUDSTACK-1206	Failure in Copy of System template
CLOUDSTACK-1210	Make all pluggable services return list of api cmd classes
CLOUDSTACK-1216	UUID is null for admin and failed to register user key with 4.0
CLOUDSTACK-1218	"IPv6: Shared Network - After network restart with clean option, router is assigned a different address. Name resolution for the existing guest Vms in the network fails.
CLOUDSTACK-1219	Ipv6 - Provide better error messages when deploying a Vm with Ip an address that is outside the network's ip range / if the ip address already is assigned to another Vm
CLOUDSTACK-1220	Ipv6 - Better error message when deploy Vm fails to get a free Ip address
CLOUDSTACK-1222	API rate limit configs: removed double quote in upgrade script
CLOUDSTACK-1223	Exception while starting jetty server: org.springframework.beans.factory.BeanCreationException Error creating bean with name 'apiServer'
CLOUDSTACK-1224	Volume snapshot creation failing
CLOUDSTACK-1226	Error while running Cloudstack-setup-database
CLOUDSTACK-1228	Unable to Create System Vm's in the VMware Hypervisor setup
CLOUDSTACK-1229	Incorrect SQL syntax to insert api limit related configuration items in upgrade path script.
CLOUDSTACK-1231	cloud-install-sys-tmplt failed due to missing path
CLOUDSTACK-1232	"Ipv6 - Guest Vms are not able to get Ipaddress when executing dhclient command when using ""/96"" network.
CLOUDSTACK-1233	Veewee configuration files are inappropriately identified as ASLv2 licensed file
CLOUDSTACK-1234	Unable to start KVM agent with 4.1 build.
CLOUDSTACK-1237	"Register Template fails with ""Cannot find template adapter for XenServer""

瑕疵	敘述
CLOUDSTACK-1239	Unable to registerISO :unhandled exception executing api command: registerIso
CLOUDSTACK-1240	Unable to registerTemplate : Cannot find template adapter for XenServer.
CLOUDSTACK-1241	Network apply rules logic is broken.
CLOUDSTACK-1242	[F5-SRX-InlineMode] Failed to create LB rule with F5-SRX inlinemode deployment
CLOUDSTACK-1243	Failed to cleanup account :java.lang.NullPointerException
CLOUDSTACK-1244	fail to push sysmvm.iso onto xen host
CLOUDSTACK-1246	"[ALU beta CS 4.1 build2] ""Guest network"" missing in Add Zone wizard (step 3, Setup Network \ Physical Network)
CLOUDSTACK-1251	Baremetal zone doesn't need primary/secondary storage in UI wizard.
CLOUDSTACK-1252	Failed to download default template in VMware.
CLOUDSTACK-1260	Failed to register template: Unable to find template adapter
CLOUDSTACK-1261	Cannot find template adapter for XenServer.
CLOUDSTACK-1262	"Failed to Prepare Secondary Storage in VMware,
CLOUDSTACK-1265	logrotate dnsmasq configuration is wrong
CLOUDSTACK-1267	KVM's cloudstack-agent service doesn't log (log4j)
CLOUDSTACK-1269	Failed to start CPVM java.lang.NullPointerException Unable to start SSVM
CLOUDSTACK-1272	Autoscale: createAutoScaleVmProfile fails due to unable to retrieve Service Offering ip
CLOUDSTACK-1274	UpdateNetworkCmd throws NP
CLOUDSTACK-1276	Remove autoscanning for 4.1
CLOUDSTACK-1277	ApiResponseHelper.createUserVmResponse failed to populate password field set from UserVm object
CLOUDSTACK-1278	Improper permissions on injectkeys.sh
CLOUDSTACK-1288	[F5-SRX-InlineMode] classCastException during network restart with cleanup option true
CLOUDSTACK-1289	[F5-SRX-InlineMode] Usage stats are not generated for Juniper SRX Firewall in inlinemode
CLOUDSTACK-1290	listNetoworks API takes too long to respond
CLOUDSTACK-1292	"[F5-SRX-InlineMode] Update network from SRX,F5 as service provideds to VR as service provider does not delete firewall rules from SRX
CLOUDSTACK-1295	NPE in usage parsers due to missing @Component inject
CLOUDSTACK-1299	Errors in 4.5.5 section of installation guide
CLOUDSTACK-1300	section in wrong order in installation guide

瑕疵	敘述
CLOUDSTACK-1303	Ipv6 - java.lang.NullPointerException when executing listnetworks() and deployVirtualMachine() after extending the Ipv4 range of a dual stack network
CLOUDSTACK-1307	Noticed NPE when we put host in maintenance mode in clustered management setup
CLOUDSTACK-1310	ASF-build-master-nonoss-rhel63 - create advance zone FAIL - CreatePhysicalNetworkCmd FAIL - MySQLIntegrityConstraintViolationException: Duplicate entry '200-Public' for key 'physical_network_id'
CLOUDSTACK-1312	"Fix rolling upgrades from 4.0 to 4.1 in 4.1 release, fix db schemas to be same as 4.0
CLOUDSTACK-1313	Working with Volumes Section Is Missing
CLOUDSTACK-1315	[F5-SRX-InlineMode] Network implement failed with Run time Exception during network upgrade from VR to SRX-F5
CLOUDSTACK-1319	createCustomerVpnGateway response gives TypeError: json.createvpncustomergatewayresponse is undefined
CLOUDSTACK-1320	Routers naming convention is changed to hostname.
CLOUDSTACK-1321	[Site-to-Site VPN] No events are generated in case of status change in site to site vpn connection
CLOUDSTACK-1326	KVM - Failed to start cloud agent from SSVM
CLOUDSTACK-1328	console view unable to connect - CPVM SSVM guest VM
CLOUDSTACK-1329	"API listRouters response returns hostname instead of Virtual Routers, UI displays host entry for each VR
CLOUDSTACK-1330	ec2-run-instances - When -n option is used to deploy multiple Vms API returns error even though few of the Vms have been deployed successfully
CLOUDSTACK-1331	Upgrade fails for a 2.2.14 Zone having multiple guest networks using network_tags and Public Vlan
CLOUDSTACK-1332	IPV6 - Router and guest Vms should be able to use an IPV6 address for external DNS entry
CLOUDSTACK-1334	vmware.root.disk.controller doesn't work
CLOUDSTACK-1337	Zone to zone template/ISO copy fails and template/ISO download also fail
CLOUDSTACK-1338	Deploy VM failed using IS
CLOUDSTACK-1339	ASF 4.1: Management server becomes unresponsive
CLOUDSTACK-1341	URL for the KEYs file is wrong in the installation guide
CLOUDSTACK-1342	Document installation and usage of cloudmonkey for 4.1 docs
CLOUDSTACK-1343	Porting Baremetal related UI changes to ACS
CLOUDSTACK-1344	Typo in use.external.dns setting description
CLOUDSTACK-1345	BigSwitch plugin introduces 'VNS' isolation in UI without backend implementation
CLOUDSTACK-1346	"Check to see if external devices are used in the network, is hardcoded for specific devices

瑕疵	敘述
CLOUDSTACK-1347	"Not able to delete network. Error - "Unable to insert queue item into database, DB is full?"
CLOUDSTACK-1348	API/UI: zoneObj is undefined.
CLOUDSTACK-1349	"VPC network Adding Network ACls, PF rules - Unable to insert queue item into database, DB is full? PF rules and NW Acls in Add state in DB
CLOUDSTACK-1350	Management server Stop and start causes previously downloaded ISOs and templates to redownload & reinstall.
CLOUDSTACK-1353	KVM 6.3 snapshot Scheduling snapshot failed due to java.lang.NullPointerException
CLOUDSTACK-1357	"Autoscale: Provisioned VMs from Netscaler not being added to lb vserver, provserver fails with provserver_err_asynctaskpoll
CLOUDSTACK-1360	The clusterid field of the createStoragePool API command should be documented as required.
CLOUDSTACK-1367	NPE noticed in logs while AgentMonitor is monitoring the host ping interval
CLOUDSTACK-1368	Shared network - Not able to delete network because of java.lang.NullPointerException
CLOUDSTACK-1369	"Ipv6 - In dual Stack network, guest VM does not have the Ipv6 address of the router programmed in /etc/resolv.conf for DNS resolution.
CLOUDSTACK-1370	DeployVM Fail - VPC or non-VPC network
CLOUDSTACK-1375	deploydb failing with acs master
CLOUDSTACK-1376	Unable to migrate VM due to internal error process exited while connecting to monitor
CLOUDSTACK-1377	HA fail - when host is shutdown, VMs and SSVMs are not failover to second host in cluster.
CLOUDSTACK-1382	vm deploy fails with Error "cannot find DeployPlannerSelector for vm"
CLOUDSTACK-1383	Deploying basic zone on 4.1 fails in NPE
CLOUDSTACK-1386	BASIC zone SSVM fail to start due to exception
CLOUDSTACK-1388	UI - ListUsers doesnt display any User except the Default Root Admin User
CLOUDSTACK-1391	EventBus is not getting injected after javelin merge
CLOUDSTACK-1394	[F5-SRX-InlineMode] Failure in static nat configuration on SRX does not result in LB configuration error in CS during LB rule configuration
CLOUDSTACK-1397	Static Nat configuration is failing with NPE
CLOUDSTACK-1399	Unhandled exception executing api command: stopVirtualMachine
CLOUDSTACK-1402	listRouters API response doesn't return linklocal IP and public IP details
CLOUDSTACK-1403	Storage and console-proxy related error

瑕疵	敘述
CLOUDSTACK-1411	Issues with VMWare Hypervisor host_ids not updated when ESX(i) crashes in instance table
CLOUDSTACK-1414	Redundant router: BACKUP switch cancelled due to lock timeout after a glitch in network.
CLOUDSTACK-1417	When invalid values are passed to createNetwork(), error message does not indicate the parameter name that has invalid values.
CLOUDSTACK-1418	As regular user, we are not allowed to deploy VM on a shared network.
CLOUDSTACK-1419	Apache-ify and apply trademark logos in the UI
CLOUDSTACK-1420	Ensure trademarks are properly attributed in publican brand
CLOUDSTACK-1423	Unable to launch UI [HTTP Status 404].
CLOUDSTACK-1425	unhandled exception executing api command: migrateVirtualMachine & recoverVirtualMachine
CLOUDSTACK-1427	Failed to delete Guestnetwork which has LB with Netscaler
CLOUDSTACK-1428	[UI] Instance which are created without display name are not visible when added to LB
CLOUDSTACK-1429	single account is unable to use same vnet across multiple physical network
CLOUDSTACK-1436	4.1 management server fails to start from RPM build artifact
CLOUDSTACK-1443	As domain admin we are allowed to create shared network
CLOUDSTACK-1446	[UI]VPC Router type should be of type vpc and not system
CLOUDSTACK-1447	[UI]Persistent Status is not displayed for VPC Tier
CLOUDSTACK-1449	listAccounts and listProjectAccounts API lists all the users not account-specific users for each account returned
CLOUDSTACK-1451	Getting EntityExistsException while creating more than one project in CS 4.1
CLOUDSTACK-1452	Public IP's are assigned to private interface with VPC Restart [PF/LB rules are not functional
CLOUDSTACK-1461	"Ipv6 - From a Vm that that is part of 2 networks, non default network router's details should not get programmed in the DNS entries of the guest VM.
CLOUDSTACK-1463	IPV6 - Ubuntu 12.10 - Multiple Nic - IPV6 address is assigned automatically for 1 nic only. Need to do a manual dhclient request to get the ipv6 for other nic.
CLOUDSTACK-1464	"IPV6 - Multi nic - Ubuntu 1210 -When Vm is stopped and started/ rebooted, i get multiple global IPV6 addresses being allocated for one of the nics.
CLOUDSTACK-1465	List Zones returns null under create instance when logged is as user
CLOUDSTACK-1467	Failed to create Volume for the System VMs
CLOUDSTACK-1469	kvm agent: agent service fails to start up

瑕疵	敘述
CLOUDSTACK-1470	unhandled exception executing api command: deployVirtualMachine
CLOUDSTACK-1472	AssignVirtualMachine API with wrong Virtual Instance ID failed with NPE
CLOUDSTACK-1473	deleteDomain is failing with NPE
CLOUDSTACK-1481	"IPV6 - When Vm is part of 1 dual network and 1 ipv6 network, name resolution using fqdn fails for the ipv6 network.
CLOUDSTACK-1482	IPV6 - We are not allowed to create a shared IPV6 network with a VLAN which already is associated with a IPV4 network
CLOUDSTACK-1484	API Throttling : api.throttling.enabled, Global setting missing
CLOUDSTACK-1485	Add Baremetal Provider back to 4.1 branch
CLOUDSTACK-1487	cloudstack-setup-agent fails to set private.network.device on KVM host add
CLOUDSTACK-1488	"Ipv6 - When Vm is deployed as part of multiple networks, one of the IPV6 address assigned to guest VM is lost.
CLOUDSTACK-1490	4.1 deb management fails to start due to tomcat dep problem
CLOUDSTACK-1496	List API Performance: listAccounts failing with OOME for high values of pagesize (>1000)
CLOUDSTACK-1499	ListAPI Performance for few APIs not as good as it was before API optimization
CLOUDSTACK-1503	listHypervisor API not getting fired when logged in as User
CLOUDSTACK-1505	Unknown column 'domain.region_id' in 'field list'
CLOUDSTACK-1509	Failed to implement network elements and resources while provisioning for persistent network(createVlanIpRange to an account
CLOUDSTACK-1511	[UI] Instances NIC details does not have Network Name
CLOUDSTACK-1512	[UI] Wrong message[message.configure.all.traffic.types] when trying to create zone with mulitple physical networks without providing the traffic label
CLOUDSTACK-1515	None of the cloudstack packges are marked for upgrade when tried to upgrade from.4.0/4.0.1 to 4.1
CLOUDSTACK-1516	Create documentation in languages that have translations available
CLOUDSTACK-1517	Check UI in languages available
CLOUDSTACK-1521	Redundant router: Services are not stopped when switch to BACKUP state
CLOUDSTACK-1526	Template registration fails in the VMware Setup
CLOUDSTACK-1531	vmware create volume from snapshot will missing date
CLOUDSTACK-1537	Restart network with clean up set to true causes Autoscaled LB rule to get mangled and unusable

瑕疵	敘述
CLOUDSTACK-1541	NPE while deleting snapshot :Unexpected exception while executing org.apache.cloudstack.api.command.user.snapshot.DeleteSnapshotCmd
CLOUDSTACK-1542	unhandled exception while creating project
CLOUDSTACK-1544	The description and the response format for the deleteUser command are incorrect
CLOUDSTACK-1550	createaccountresponse returns more than the user you requested for creation
CLOUDSTACK-1553	AWS Regions-Not able to list accounts from the 2nd region after user/account/domain details have been manually synced up from first region
CLOUDSTACK-1555	"AWS Regions - userapikey and usersecretkey parameters are not returned in the response of addRegion, updateRegion listRegion api calls..
CLOUDSTACK-1557	EC2 REST API : cloudbridge database is missing on the CloudStack Installation
CLOUDSTACK-1562	Replace the short-cut solution of supportting @DB with the formal one
CLOUDSTACK-1565	"Used Master Branch System VM Template: Default Route on the System VMs (SSVM,CPVM and VR) is missing
CLOUDSTACK-1566	Baremetal API addBaremetalPxePingServer fail to add PXE PING server to deployment causing create instance with PING style image to fail
CLOUDSTACK-1569	"AWS Regions - Not able to Edit domain/account/user from a region that is not the owner region.""The content of elements must consist of well-formed character data or markup."" - error message presented to the user.
CLOUDSTACK-1571	"AWS Regions - When deleting domain/account/user from a region that is not the owner, the request is not being forwarded to the owner region.
CLOUDSTACK-1574	updateResourceCount API is failed saying to specify valida resource type even after parsing the valid resource type
CLOUDSTACK-1583	AWS Regions - RabbitMQ Server did not recieve any event notification during account creation
CLOUDSTACK-1587	Basic zone - CPVM fail to go to running state, Exception while trying to start secondary storage vm
CLOUDSTACK-1588	AWS Regions - When registerUserKeys() is called for a user from a region that is not the owner, it is handled by this region.
CLOUDSTACK-1600	Typo in dpkg-buildpackage command
CLOUDSTACK-1604	deploy VM failed when global setting "vm.allocation.algorithm" is set to "userdispersing
CLOUDSTACK-1615	"VMware Cluster discovery fails with if ESXi version is 5.0 Update 1, build 721882
CLOUDSTACK-1620	Cannot provision CentOS 6 VMs on XenServer 6.1

瑕疵	敘述
CLOUDSTACK-1621	listProjectInvitations fails with NPE for valid request
CLOUDSTACK-1624	API is not returning response in details:UI is also not returning any output
CLOUDSTACK-1625	NPE with updateResourceCount when && is passed thru API
CLOUDSTACK-1630	4.0.x cloud-aws-api not properly obsoleted
CLOUDSTACK-1631	4.1 RPM packaging broken
CLOUDSTACK-1636	AWS Regions - Remove the concept of having an owner region for domain/account/user objects
CLOUDSTACK-1642	Add support CentOS 6.4
CLOUDSTACK-1648	Unable to add KVM host.
CLOUDSTACK-1649	vmware vm os type error
CLOUDSTACK-1651	agent scripts still pointing to /var/log/cloud
CLOUDSTACK-1656	NicResponses in a UserVmResponse are not preserving the natural order
CLOUDSTACK-1663	AWS Regions - Events - There are no events being generated when a new domain is added/edited
CLOUDSTACK-1664	Action Events are not logged due to spring change
CLOUDSTACK-1665	AWS Regions - Events - There are no events being generated when a new user is added/edited/enabled/deleted/password changes/api & secret keys are generated
CLOUDSTACK-1666	KVM VPC NetworkUsage does not work
CLOUDSTACK-1668	IP conflict in VPC tier
CLOUDSTACK-1671	AWS Regions - Events - Domain Delete event does not include the UUID of the domain that was deleted
CLOUDSTACK-1674	AWS Regions - Events - Account Deletion event does not include the UUID of the account deleted
CLOUDSTACK-1681	Upgrade instructions mention incorrect name and description of systemvm-vmware template in registering template section
CLOUDSTACK-1684	"api.throttling.enabled configuration setting should be set to ""false"" in Config.java
CLOUDSTACK-1688	AWS Regions - Domain admin user is not able to use getUser() command to fetch user details
CLOUDSTACK-1690	NPE from API server when starting mgmt server
CLOUDSTACK-1694	Issues to start/access Management Server after upgrade from 4.0 to 4.1
CLOUDSTACK-1697	Six DB tables are not available with upgraded setup(4.0 to 4.1) when compare to 4.1 newly installation
CLOUDSTACK-1706	Failed to deploy VM with error "cannot find DeployPlannerSelector"
CLOUDSTACK-1709	AWS Regions - As part of adding a new region, project related entries should not be synced from accounts table.

瑕疵	敘述
CLOUDSTACK-1710	AWS Regions - As part of adding a new region,default_zone_id column for the account entries should not be synced.
CLOUDSTACK-1711	AWS Regions - Include all the details of the API call made in the Events payload when changes in Admin/Account/User objects are made.
CLOUDSTACK-1713	EC2 REST API: AWS API Installation Problem
CLOUDSTACK-1714	Doc section has wrong title: Setting Zone VLAN and Running VM Maximum
CLOUDSTACK-1715	"Missing ""host"" config setting in docs on management server load balancing
CLOUDSTACK-1716	"AWS Regions - listRegions(),removeRegions(),updateRegions() should accept UUID value instead of id.
CLOUDSTACK-1718	AWS Regions - removeRegion() response returns updateregionresponse
CLOUDSTACK-1719	EC2 REST API: AWS APIs are not getting translated on the CloudStack Management Server
CLOUDSTACK-1720	Have an upgrade path from 4.0.x to 4.1 and 4.0.x to 4.2.0
CLOUDSTACK-1729	Ensure adapter execution order in runtime
CLOUDSTACK-1733	[ACS41][UI] Add guest network is missing ip range fields and missing network offering
CLOUDSTACK-1736	Ubuntu 12.04 cloud-setup-management Failed to configure CloudStack Management Server
CLOUDSTACK-1738	StatsCollector is not running
CLOUDSTACK-1740	Failed to view console
CLOUDSTACK-1746	Cloudstack Usage Server won't start
CLOUDSTACK-1747	"mvn deploydb only creates 4.0 DB, not 4.1
CLOUDSTACK-1750	injectkeys script fails on OSX because cp does not have a -b option (backup of destination file
CLOUDSTACK-1761	Available local storage disk capacity incorrectly reported in KVM to manager
CLOUDSTACK-1764	ListTemplateCommand failed with java.lang.NumberFormatException and failed to create default template.
CLOUDSTACK-1772	the change in vnc listening port will cause live migration doesn't work.
CLOUDSTACK-1773	Disable baremetal functionality
CLOUDSTACK-1776	NPE on listSecondaryStorageHostsInAllZones in Upgraded setup from 4.0 to 4.1.0
CLOUDSTACK-1785	Redundant Router test cases failing during automation run.
CLOUDSTACK-1789	Unable to download templates to Primary Storage if a host is in maintenance.

瑕疵	敘述
CLOUDSTACK-1791	Volumes with storage tags can't be attached.
CLOUDSTACK-1792	"AWS Regions - RuntimeException while executing listAccounts(), when the encryption keys are set to different values between regions.
CLOUDSTACK-1793	L10n docs don't build in chinese, portuguese and japanese
CLOUDSTACK-1795	Customize AOP to fully support legacy CloudStack @DB and @ActionEvent semantics.
CLOUDSTACK-1796	Japanese docs don't build.
CLOUDSTACK-1802	Upgrade 4.0 -> 4.1 - Not able to start management server becasue of missing /etc/cloudstack/management/tomcat6.conf file
CLOUDSTACK-1804	Upgrade 4.0 -> 4.1 - DB upgrade fails
CLOUDSTACK-1805	com.mysql.jdbc.exceptions.jdbc4.CommunicationsException seen after long time of inactivity resulting in not being able to log in to the management server
CLOUDSTACK-1810	listTemplate API with templatefilter=featured|community is not returning any lists
CLOUDSTACK-1811	"Upgrade 4.0->4.1 - When upgrade scripts fail, component loading continues and management server starts.
CLOUDSTACK-1812	create physical network fails while creating basic zone
CLOUDSTACK-1825	EC2 REST API: AWS APIs fail to execute due to BeanCreationException: Error creating bean with name 'SAclDaoImpl'
CLOUDSTACK-1826	"Storage migration not working, seemingly due to uuid vs id
CLOUDSTACK-1827	Redundant router - When VR Master was stopped failover to VR Backup did not occur.
CLOUDSTACK-1834	"Events are not generated for registerUserKeys(), Enabling account and Editing account.
CLOUDSTACK-1836	License header failures for ja-JP .po translation file
CLOUDSTACK-1839	Upgrade 4.0 -> 4.1 - Upgraded DB has lot more keys and indexes for many tables compare to the fresh installed 4.1 DB
CLOUDSTACK-1841	ASF 4.0 to 4.1 Upgrade: Missing Few Global Configuration parameters on the Upgraded Setup.
CLOUDSTACK-1842	ASF 4.0 to 4.1 Upgrade: Missing Ubuntu 12.04 Guest OS Types on the Upgraded Setup.
CLOUDSTACK-1844	Upgrade 4.0 -> 4.1 - KVM host agent.properties is not restored as part of upgrading the binaries from 4.0 to 4.1.
CLOUDSTACK-1845	KVM - storage migration often fails
CLOUDSTACK-1846	"KVM - storage pools can silently fail to be unregistered, leading to failure to register later.
CLOUDSTACK-1848	Cloudstack Packages are not got updated with scenario 4.0 to 4.1 upgrade where MS is on Ubuntu 12.04.

瑕疵	敘述
CLOUDSTACK-1856	Upgrade 4.0 -> 4.1 - Fresh install of 4.1 has 3 parameters missing in db.properties compared to an upgraded 4.0 setup
CLOUDSTACK-1873	"Installation : JasyptPBEStringDecryptionCLI missing, failed to decrypt db password
CLOUDSTACK-1874	AWS Regions - Account table in cloud_usage DB has region_id
CLOUDSTACK-1876	External Devices - network offering for external devices is not returned in API listNetworkOfferings when creating instances.
CLOUDSTACK-1877	Failed to connect to DB while starting Ubuntu management server after upgrading the packages from 4.0 to 4.1.0
CLOUDSTACK-1882	“HTTP Status 404 ◦ The requested resource () is not available.
CLOUDSTACK-1890	listProjects is not listing state in the response
CLOUDSTACK-1900	"Upgrade 4.0 -> 4.1, We do not have a copy of db.properties that comes from a 4.1 installation saved anywhere.
CLOUDSTACK-1929	ASF 4.1 cloudstack agent fail to install in KVM host CENTOS 6.3 OS: qemu-kvm-0.12.1.2-3.295.el6.10.x86_64 requires libusbredirparser.so.0
CLOUDSTACK-1934	NPE with listSupportedNetworkServices after upgrade from 4.0 to 4.1 (Ubuntu MS)
CLOUDSTACK-1935	Cloud utilities are not renamed to Cloudstack after upgrade from 4.0 to 4.1 [Ubutnu MS]
CLOUDSTACK-1936	On CentOS, after a upgrade from 4.0.1 to 4.1 on a cloud node (cloud-agent), the new cloustack-agent isn't add as a service (chkconfig)
CLOUDSTACK-1951	centos packaging: cloud-install-sys-tmplt can't find jasypt jar.
CLOUDSTACK-1971	VM deployed to incorrect primary storage.
CLOUDSTACK-1972	VM deployed to incorrect primary storage.
CLOUDSTACK-1978	openvswitch - unable to start console session for SSVM CPVM user VM
CLOUDSTACK-1980	"[4.1]cloudstack-setup-bridge, cloudstack-setup-encryption & cloudstack-sysvmadm utilities are not available in Ubuntu 12.04 Management Server.
CLOUDSTACK-1987	Deleted service offerings owned by a domain show up to domain user.
CLOUDSTACK-1988	AWS API using SOAP client - User Registration fails
CLOUDSTACK-1989	"Query service offering by ID returns no result, but querying all returns service offering
CLOUDSTACK-2003	Deleting domain while deleted account is cleaning up leaves VMs expunging forever due to 'Failed to update resource count
CLOUDSTACK-2007	Release Notes failing to build on jenkins.cs.

3.3. Known Issues in 4.1.0

Issue ID	敘述
CLOUDSTACK-2492[23]	System VM Clock Drift Testing of the new S3-backed secondary storage feature identified that the system VM templates offered as part of the 3.x releases (which are still the official templates for 4.1.0) did not contain the necessary configuration to enable time synchronization within the system VM guest operating systems. With 4.1.0, this issue has been corrected for both the VMware vSphere and KVM system VM flavors via post boot configurations. The XenServer system VM template does not have an official fix for this problem. If you choose to take advantage of the new S3-backed secondary storage feature while running your system VMs on XenServer, you may be impacted by time synchronization issues.
CLOUDSTACK-1747[24]	mvn deploydb only creates 4.0 DB, not 4.1 Due to tooling changes between 4.1 and 4.2, CloudStack's database is created using the 4.0 schema and updated to the 4.1 schema when the management server starts for the first time. It's OK to see the same schema if the management server has not started yet.
CLOUDSTACK-1824[25]	Service CloudStack-Management is being displayed as cloud-management service Many scripts and text entries have references to cloud-management rather than cloudstack-management due to the changeover between 4.0 and 4.1 to rename services. This is a minor issue and should be corrected by 4.2.
CLOUDSTACK-1824[26]	Service CloudStack-Management is being displayed as cloud-management service
CLOUDSTACK-1510[27]	NPE when primary storage is added with wrong path
CLOUDSTACK-1428[28]	[UI] Instance which are created without display name are not visible when added to LB
CLOUDSTACK-1306[29]	Better Error message when trying to deploy Vm by passing static Ipv4 addresses that are assigned to another VM/IP4 address is outside the iprange.
CLOUDSTACK-1236[30]	Warning while adding Xen 6.1 host [Unable to create local link network]

[23] https://issues.apache.org/jira/browse/CLOUDSTACK-2492
[24] https://issues.apache.org/jira/browse/CLOUDSTACK-1747
[25] https://issues.apache.org/jira/browse/CLOUDSTACK-1824
[26] https://issues.apache.org/jira/browse/CLOUDSTACK-1824
[27] https://issues.apache.org/jira/browse/CLOUDSTACK-1510
[28] https://issues.apache.org/jira/browse/CLOUDSTACK-1428
[29] https://issues.apache.org/jira/browse/CLOUDSTACK-1306
[30] https://issues.apache.org/jira/browse/CLOUDSTACK-1236

Issue ID	敘述
CLOUDSTACK-969[31]	api: zone response lists vlan in it as "vlan range of zone" but the vlan belongs to physical network
CLOUDSTACK-963[32]	[cloud.utils.AnnotationHelper] class java.lang.Stringdoes not have a Table annotation
CLOUDSTACK-458[33]	xen:snapshots:Storage gc fail to clean the failed snapshot images from secondarystorage
CLOUDSTACK-315[34]	Infrastructure view does not show capacity values
CLOUDSTACK-300[35]	Creation of compute offering allow combination of local storage + HA
CLOUDSTACK-282[36]	Virtual Routers do not properly resolve DNS SRV Records
CLOUDSTACK-276[37]	SSVM ID is exposed in the Error Message thrown by AddTrafficType API
CLOUDSTACK-270[38]	Ui should not ask for a vlan range if the physical network isolation type is not VLAN
CLOUDSTACK-245[39]	VPC ACLs are not stored and programmed consistently
CLOUDSTACK-231[40]	Tag creation using special charecters
CLOUDSTACK-124[41]	NetworkGarbageCollector not cleaning up networks
CLOUDSTACK-62[42]	console proxy does not support any keymaps besides us, jp
CLOUDSTACK-77[43]	console proxy display issues
CLOUDSTACK-79[44]	CloudStack 3.0.4: firewall rules not restored on KVM host
CLOUDSTACK-105[45]	/tmp/stream-unix.####.####### stale sockets causing inodes to run out on Xenserver
CLOUDSTACK-107[46]	Network domain guest suffix is not getting programmed as part of hostnames on Guest VMs that are part of Isolated and Shared Guest Networks
CLOUDSTACK-133[47]	Multiple DHCP Servers are being created on the shared network on using multiple Network Ranges from the same shared network.

[31] https://issues.apache.org/jira/browse/CLOUDSTACK-969
[32] https://issues.apache.org/jira/browse/CLOUDSTACK-963
[33] https://issues.apache.org/jira/browse/CLOUDSTACK-458
[34] https://issues.apache.org/jira/browse/CLOUDSTACK-315
[35] https://issues.apache.org/jira/browse/CLOUDSTACK-300
[36] https://issues.apache.org/jira/browse/CLOUDSTACK-282
[37] https://issues.apache.org/jira/browse/CLOUDSTACK-276
[38] https://issues.apache.org/jira/browse/CLOUDSTACK-270
[39] https://issues.apache.org/jira/browse/CLOUDSTACK-245
[40] https://issues.apache.org/jira/browse/CLOUDSTACK-231
[41] https://issues.apache.org/jira/browse/CLOUDSTACK-124
[42] https://issues.apache.org/jira/browse/CLOUDSTACK-62
[43] https://issues.apache.org/jira/browse/CLOUDSTACK-77
[44] https://issues.apache.org/jira/browse/CLOUDSTACK-79
[45] https://issues.apache.org/jira/browse/CLOUDSTACK-105
[46] https://issues.apache.org/jira/browse/CLOUDSTACK-107
[47] https://issues.apache.org/jira/browse/CLOUDSTACK-133

Issue ID	敘述
CLOUDSTACK-155[48]	HA checks lead to unnecessary Compute Node reboot when Primary Storage is in Maintenance Mode
CLOUDSTACK-187[49]	CloudStack reports incorrect CPU & RAM usage values for hosts in Basic zone
CLOUDSTACK-207[50]	"listCapacity API is not able to list clusterwide capacities when used with "sortby=Usage" parameter"
CLOUDSTACK-234[51]	create/delete firewa/lb/pf rule: send ip assoc command just for the IP for which you are creating the rule
CLOUDSTACK-236[52]	Network Offering IDs are being exposed to the Regular User Account in the UpdateNetworkCmd Error message
CLOUDSTACK-237[53]	StopVMCommand reported success in spite of failing to stop a VM which got stuck during installation from an ISO
CLOUDSTACK-238[54]	vpn:fail to connect to vpnserver using non-sourceNAT IP
CLOUDSTACK-242[55]	haproxy listens on all interfaces on VR
CLOUDSTACK-243[56]	"On management server, security for remote JMX connections is disabled"
CLOUDSTACK-244[57]	RPC port on SSVM is open on all interfaces
CLOUDSTACK-252[58]	"UpdateNetwork Operation on a guest network that is currently using Virtual Router for Lb services to a network offering that uses "F5" for Lb services Fails due to MySQLIntegrityConstraintViolationException."
CLOUDSTACK-255[59]	Null pointer exception while creating portforwarding rule after performing UpdateNetworkCmd
CLOUDSTACK-272[60]	Delete failure message for network with a VM is not informative
CLOUDSTACK-280[61]	Exception thrown on going to Step 5 of Add VM Instance - CloudRuntimeException: Tags are not defined for physical network in the zone id=1
CLOUDSTACK-281[62]	"On Updating the VMWare Traffic Labels of existing Physical Networks to Invalid Values; Triggering a ReconnectHost Command, successfully reconnected the ESXi host instead of reporting an Alert"

[48] https://issues.apache.org/jira/browse/CLOUDSTACK-155
[49] https://issues.apache.org/jira/browse/CLOUDSTACK-187
[50] https://issues.apache.org/jira/browse/CLOUDSTACK-207
[51] https://issues.apache.org/jira/browse/CLOUDSTACK-234
[52] https://issues.apache.org/jira/browse/CLOUDSTACK-236
[53] https://issues.apache.org/jira/browse/CLOUDSTACK-237
[54] https://issues.apache.org/jira/browse/CLOUDSTACK-238
[55] https://issues.apache.org/jira/browse/CLOUDSTACK-242
[56] https://issues.apache.org/jira/browse/CLOUDSTACK-243
[57] https://issues.apache.org/jira/browse/CLOUDSTACK-244
[58] https://issues.apache.org/jira/browse/CLOUDSTACK-252
[59] https://issues.apache.org/jira/browse/CLOUDSTACK-255
[60] https://issues.apache.org/jira/browse/CLOUDSTACK-272
[61] https://issues.apache.org/jira/browse/CLOUDSTACK-280
[62] https://issues.apache.org/jira/browse/CLOUDSTACK-281

Issue ID	敘述
CLOUDSTACK-298[63]	putting host in maintenance mode while creating snapshot ,host resorce state stuck in "ErrorInMaintenance mode" and snapshot creation fail Unable to migrate due to Requested operation is not valid: cannot migrate domain with 1 snapshots
CLOUDSTACK-305[64]	AWS APi - "Rolling back the transaction" seen in management server logs , everytime a soap call is made.
CLOUDSTACK-308[65]	ec2-describe-instances - Instance type is always retuned as "m1.small"
CLOUDSTACK-310[66]	Failed to add host - Plugin error
CLOUDSTACK-324[67]	"Cannot edit default security group rules, default security group blocks all inbound traffic."
CLOUDSTACK-338[68]	Unique Names of Disk and Service Offerings in the database are prefixed with "Cloud.com" String
CLOUDSTACK-425[69]	Check image type is qcow2 before actually installing
CLOUDSTACK-440[70]	create networks in advanced zone with out VLAN isolation
CLOUDSTACK-568[71]	Source template id is recorded incorrectly.
CLOUDSTACK-643[72]	KVM snapshots deleted on UI/API do not physically delete from secondary storage
CLOUDSTACK-797[73]	Remove or fix unknown classes in cloud-api
CLOUDSTACK-970[74]	when a template is deleted and then copied over again , it is still marked as "Removed" in template_zone_ref table.
CLOUDSTACK-989[75]	marvin: jsonHelper deserialization results in unfilled attributes
CLOUDSTACK-1007[76]	Not able to delete Shared network because of not being able to stop the router.
CLOUDSTACK-1187[77]	Handle network creation failures when persistent is set to true
CLOUDSTACK-1199[78]	External DNS not being added to reslov.conf
CLOUDSTACK-1209[79]	VPC VR starts despite NPE

[63] https://issues.apache.org/jira/browse/CLOUDSTACK-298
[64] https://issues.apache.org/jira/browse/CLOUDSTACK-305
[65] https://issues.apache.org/jira/browse/CLOUDSTACK-308
[66] https://issues.apache.org/jira/browse/CLOUDSTACK-310
[67] https://issues.apache.org/jira/browse/CLOUDSTACK-324
[68] https://issues.apache.org/jira/browse/CLOUDSTACK-338
[69] https://issues.apache.org/jira/browse/CLOUDSTACK-425
[70] https://issues.apache.org/jira/browse/CLOUDSTACK-440
[71] https://issues.apache.org/jira/browse/CLOUDSTACK-568
[72] https://issues.apache.org/jira/browse/CLOUDSTACK-643
[73] https://issues.apache.org/jira/browse/CLOUDSTACK-797
[74] https://issues.apache.org/jira/browse/CLOUDSTACK-970
[75] https://issues.apache.org/jira/browse/CLOUDSTACK-989
[76] https://issues.apache.org/jira/browse/CLOUDSTACK-1007
[77] https://issues.apache.org/jira/browse/CLOUDSTACK-1187
[78] https://issues.apache.org/jira/browse/CLOUDSTACK-1199
[79] https://issues.apache.org/jira/browse/CLOUDSTACK-1209

Issue ID	敘述
CLOUDSTACK-1304[80]	"mvn -pl :cloud-client-ui jetty:run" strips permission of files in script/
CLOUDSTACK-1352[81]	"KVM 6.3 snapshot - when snapshot of ROOT volume is being created, snapshot of data volume remains in Creating state"
CLOUDSTACK-1393[82]	Install scripts shows wrong path to copy vhd-util
CLOUDSTACK-1413[83]	Need something to concretely identify the version of the code in a particular build
CLOUDSTACK-1424[84]	Failed with NPE while deleting account when there are snapshots created for this account instances
CLOUDSTACK-1439[85]	Baremetal - UI/API security group unable to set egress rule > UI displays args.context.networks is undefined
CLOUDSTACK-1581[86]	IPV6 - UI - IPV6 DNS entries should not be exposed for Basic Zone.
CLOUDSTACK-1638[87]	Network plugins won't be notified VM migration.
CLOUDSTACK-1673[88]	AWS Regions - Events - User disable / Domain Delete event does not include the UUID of the user/domain that was disabled.
CLOUDSTACK-1717[89]	AWS Regions - Local region entry that gets added by default should not include "/api" for its end_point.Also the endpoint should have the actual hostname instead of localhost."
CLOUDSTACK-1752[90]	IPV6 - Router of a ipv6 network has external ipv4 dns entries programmed in /etc/resolv.conf
CLOUDSTACK-1758[91]	CloudPlatform CS-17541 SSVM test cases failing in VMware with 4.1 builds
CLOUDSTACK-1771[92]	"IPv6 - Network restart for a dual network , results in the ipv4 address of the router to be changed. After netwpork restart , name resolution of the Vms fail."
CLOUDSTACK-1775[93]	"AWS Regions - Events Framework - Events relating to User/Domain/Account are not being published to the RabbitMQ server expect for USER-DISABLE,DOMAIN-DELETE and ACCOUNT.DISABLE event."

[80] https://issues.apache.org/jira/browse/CLOUDSTACK-1304
[81] https://issues.apache.org/jira/browse/CLOUDSTACK-1352
[82] https://issues.apache.org/jira/browse/CLOUDSTACK-1393
[83] https://issues.apache.org/jira/browse/CLOUDSTACK-1413
[84] https://issues.apache.org/jira/browse/CLOUDSTACK-1424
[85] https://issues.apache.org/jira/browse/CLOUDSTACK-1439
[86] https://issues.apache.org/jira/browse/CLOUDSTACK-1581
[87] https://issues.apache.org/jira/browse/CLOUDSTACK-1638
[88] https://issues.apache.org/jira/browse/CLOUDSTACK-1673
[89] https://issues.apache.org/jira/browse/CLOUDSTACK-1717
[90] https://issues.apache.org/jira/browse/CLOUDSTACK-1752
[91] https://issues.apache.org/jira/browse/CLOUDSTACK-1758
[92] https://issues.apache.org/jira/browse/CLOUDSTACK-1771
[93] https://issues.apache.org/jira/browse/CLOUDSTACK-1775

Issue ID	敘述
CLOUDSTACK-1794[94]	We are allowed to create Egress rules for Shared networks.
CLOUDSTACK-1819[95]	AWS Regions - Issues seen when trying to move a zone from 1 region to another.
CLOUDSTACK-1868[96]	GetVmStatsCommand throws NullPointerException with VMWare
CLOUDSTACK-1885[97]	Broken testcases in 4.1
CLOUDSTACK-1899[98]	SRX firewall external devices - static NAT does not function
CLOUDSTACK-1948[99]	users can no longer set global limits to -1 (e.g. pagesize)
CLOUDSTACK-1965[100]	15.8. External Firewalls and Load Balancers Section is Incomplete
CLOUDSTACK-1969[101]	Ubuntu fresh Install- SystemIntegrityChecker looking for "schema-40to410.sql" wrong location and failed to start MS
CLOUDSTACK-1970[102]	Ubuntu - "cloudstack-setup-management" not available in "/usr/bin"
CLOUDSTACK-2024[103]	cloudstack-setup-management with https not works (incorrect path and missing keystore file)
CLOUDSTACK-2053[104]	[BUG] userdata.sh on router VM fixes for if else logic and missing meta-data

[94] https://issues.apache.org/jira/browse/CLOUDSTACK-1794
[95] https://issues.apache.org/jira/browse/CLOUDSTACK-1819
[96] https://issues.apache.org/jira/browse/CLOUDSTACK-1868
[97] https://issues.apache.org/jira/browse/CLOUDSTACK-1885
[98] https://issues.apache.org/jira/browse/CLOUDSTACK-1899
[99] https://issues.apache.org/jira/browse/CLOUDSTACK-1948
[100] https://issues.apache.org/jira/browse/CLOUDSTACK-1965
[101] https://issues.apache.org/jira/browse/CLOUDSTACK-1969
[102] https://issues.apache.org/jira/browse/CLOUDSTACK-1970
[103] https://issues.apache.org/jira/browse/CLOUDSTACK-2024
[104] https://issues.apache.org/jira/browse/CLOUDSTACK-2053

更新指示

This section contains upgrade instructions from prior versions of CloudStack to Apache CloudStack 4.1.0. We include instructions on upgrading to Apache CloudStack from pre-Apache versions of Citrix CloudStack (last version prior to Apache is 3.0.2) and from the releases made while CloudStack was in the Apache Incubator.

If you run into any issues during upgrades, please feel free to ask questions on users@cloudstack.apache.org or dev@cloudstack.apache.org.

4.1. Upgrade from 4.0.x to 4.1.0

This section will guide you from CloudStack 4.0.x versions to CloudStack 4.1.0.

Any steps that are hypervisor-specific will be called out with a note.

Package Structure Changes

The package structure for CloudStack has changed significantly since the 4.0.x releases. If you've compiled your own packages, you'll notice that the package names and the number of packages has changed. This is not a bug.

However, this does mean that the procedure is not as simple as an apt-get upgrade or yum update, so please follow this section carefully.

We recommend reading through this section once or twice before beginning your upgrade procedure, and working through it on a test system before working on a production system.

1. Most users of CloudStack manage the installation and upgrades of CloudStack with one of Linux's predominant package systems, RPM or APT. This guide assumes you'll be using RPM and Yum (for Red Hat Enterprise Linux or CentOS), or APT and Debian packages (for Ubuntu).

   Create RPM or Debian packages (as appropriate) and a repository from the 4.1.0 source, or check the Apache CloudStack downloads page at http://cloudstack.apache.org/downloads.html for package repositories supplied by community members. You will need them for step 8 or step 9.

   Instructions for creating packages from the CloudStack source are in the Installation Guide[1].

2. Stop your management server or servers. Run this on all management server hosts:

   ```
   # service cloud-management stop
   ```

3. If you are running a usage server or usage servers, stop those as well:

   ```
   # service cloud-usage stop
   ```

[1] http://cloudstack.apache.org/docs/en-US/index.html

4. Make a backup of your MySQL database. If you run into any issues or need to roll back the upgrade, this will assist in debugging or restoring your existing environment. You'll be prompted for your password.

```
# mysqldump -u root -p cloud > cloudstack-backup.sql
```

5. Whether you're upgrading a Red Hat/CentOS based system or Ubuntu based system, you're going to need to stop the CloudStack management server before proceeding.

```
# service cloud-management stop
```

6. If you have made changes to /etc/cloud/management/components.xml, you'll need to carry these over manually to the new file, /etc/cloudstack/management/componentContext.xml. This is not done automatically. (If you're unsure, we recommend making a backup of the original components.xml to be on the safe side.

7. After upgrading to 4.1, API clients are expected to send plain text passwords for login and user creation, instead of MD5 hash. Incase, api client changes are not acceptable, following changes are to be made for backward compatibility:

   Modify componentsContext.xml, and make PlainTextUserAuthenticator as the default authenticator (1st entry in the userAuthenticators adapter list is default)

```
<!-- Security adapters -->
<bean id="userAuthenticators" class="com.cloud.utils.component.AdapterList">
  <property name="Adapters">
    <list>
      <ref bean="PlainTextUserAuthenticator"/>
      <ref bean="MD5UserAuthenticator"/>
      <ref bean="LDAPUserAuthenticator"/>
    </list>
  </property>
</bean>
```

   PlainTextUserAuthenticator works the same way MD5UserAuthenticator worked prior to 4.1.

8. If you are using Ubuntu, follow this procedure to upgrade your packages. If not, skip to step 9.

Community Packages

This section assumes you're using the community supplied packages for CloudStack. If you've created your own packages and APT repository, substitute your own URL for the ones used in these examples.

   a. The first order of business will be to change the sources list for each system with CloudStack packages. This means all management servers, and any hosts that have the KVM agent. (No changes should be necessary for hosts that are running VMware or Xen.)

Start by opening /etc/apt/sources.list.d/cloudstack.list on any systems that have CloudStack packages installed.

This file should have one line, which contains:

```
deb http://cloudstack.apt-get.eu/ubuntu precise 4.0
```

We'll change it to point to the new package repository:

```
deb http://cloudstack.apt-get.eu/ubuntu precise 4.1
```

If you're using your own package repository, change this line to read as appropriate for your 4.1.0 repository.

b. Now update your apt package list:

```
$ sudo apt-get update
```

c. Now that you have the repository configured, it's time to install the cloudstack-management package. This will pull in any other dependencies you need.

```
$ sudo apt-get install cloudstack-management
```

d. You will need to manually install the cloudstack-agent package:

```
$ sudo apt-get install cloudstack-agent
```

During the installation of cloudstack-agent, APT will copy your agent.properties, log4j-cloud.xml, and environment.properties from /etc/cloud/agent to /etc/cloudstack/agent.

When prompted whether you wish to keep your configuration, say Yes.

e. Verify that the file /etc/cloudstack/agent/environment.properties has a line that reads:

```
paths.script=/usr/share/cloudstack-common
```

If not, add the line.

f. Restart the agent:

```
service cloud-agent stop
killall jsvc
service cloudstack-agent start
```

g. During the upgrade, log4j-cloud.xml was simply copied over, so the logs will continue to be added to /var/log/cloud/agent/agent.log. There's nothing wrong with this, but if you prefer to be consistent, you can change this by copying over the sample configuration file:

```
cd /etc/cloudstack/agent
mv log4j-cloud.xml.dpkg-dist log4j-cloud.xml
service cloudstack-agent restart
```

h. Once the agent is running, you can uninstall the old cloud-* packages from your system:

```
sudo dpkg --purge cloud-agent
```

9. If you are using CentOS or RHEL, follow this procedure to upgrade your packages. If not, skip to step 10.

Community Packages

This section assumes you're using the community supplied packages for CloudStack. If you've created your own packages and yum repository, substitute your own URL for the ones used in these examples.

a. The first order of business will be to change the yum repository for each system with CloudStack packages. This means all management servers, and any hosts that have the KVM agent. (No changes should be necessary for hosts that are running VMware or Xen.)

   Start by opening /etc/yum.repos.d/cloudstack.repo on any systems that have CloudStack packages installed.

   This file should have content similar to the following:

```
[apache-cloudstack]
name=Apache CloudStack
baseurl=http://cloudstack.apt-get.eu/rhel/4.0/
enabled=1
gpgcheck=0
```

   If you are using the community provided package repository, change the baseurl to http://cloudstack.apt-get.eu/rhel/4.1/

   If you're using your own package repository, change this line to read as appropriate for your 4.1.0 repository.

b. Now that you have the repository configured, it's time to install the cloudstack-management package by upgrading the older cloud-client package.

```
$ sudo yum upgrade cloud-client
```

c. For KVM hosts, you will need to upgrade the cloud-agent package, similarly installing the new version as cloudstack-agent.

```
$ sudo yum upgrade cloud-agent
```

During the installation of cloudstack-agent, the RPM will copy your agent.properties, log4j-cloud.xml, and environment.properties from /etc/cloud/agent to /etc/cloudstack/agent.

d. Verify that the file /etc/cloudstack/agent/environment.properties has a line that reads:

```
paths.script=/usr/share/cloudstack-common
```

If not, add the line.

e. Restart the agent:

```
service cloud-agent stop
killall jsvc
service cloudstack-agent start
```

10. Once you've upgraded the packages on your management servers, you'll need to restart the system VMs. Make sure port 8096 is open in your local host firewall to do this.

There is a script that will do this for you, all you need to do is run the script and supply the IP address for your MySQL instance and your MySQL credentials:

```
# nohup cloudstack-sysvmadm -d IP address -u cloud -p -a > sysvm.log 2>&1 &
```

You can monitor the log for progress. The process of restarting the system VMs can take an hour or more.

```
# tail -f sysvm.log
```

The output to sysvm.log will look something like this:

```
Stopping and starting 1 secondary storage vm(s)...
Done stopping and starting secondary storage vm(s)
Stopping and starting 1 console proxy vm(s)...
Done stopping and starting console proxy vm(s).
Stopping and starting 4 running routing vm(s)...
Done restarting router(s).
```

11. 

For Xen Hosts: Copy vhd-utils

This step is only for CloudStack installs that are using Xen hosts.

Copy the file vhd-utils to /usr/share/cloudstack-common/scripts/vm/hypervisor/xenserver.

4.2. Upgrade from 3.0.2 to 4.1.0

This section will guide you from Citrix CloudStack 3.0.2 to Apache CloudStack 4.1.0. Sections that are hypervisor-specific will be called out with a note.

1.

注意

The following upgrade instructions apply only if you're using VMware hosts. If you're not using VMware hosts, skip this step and move on to 2.

在每個包含VMware主機的zone中新增一個VM系統模組

a. 當您正在執行現有的3.0.2版本系統，請以root登入使用者介面

b. 在左邊的導覽視窗，選擇Templates

c. 在Select視窗選擇Templates

d. 選擇 Register template

會顯示 Register template對話框

e. 在 Register template對話框指定以下數值(不會改變)：

Field	數值
名稱	systemvm-vmware-4.0
敘述	systemvm-vmware-4.0
URL	http://download.cloud.com/templates/burbank/burbank-systemvm-08012012.ova
Zone	選擇超級監督者使用的zone
超級監督者	VMware
格式	OVA
作業系統型態	Debian GNU/Linux 5.0 (32-bit)
Extractable	no
啓用密碼	no
Public	no
Featured	no

f. 請確定模組下載成功，然後進入 READY 狀態，請不要繼續如果此步驟還未成功

2. 將所有主機上的所有Usage Servers停止

```
# service cloud-usage stop
```

3. 停止所有主機的所有Management Servers

```
# service cloud-management stop
```

4. 我們建議，即使在測試更新階段，先用MySQL master備份MySQL資料庫，如果出現問題，備份能夠幫助除錯

   以下指令是假設您已經在資料庫上設定root的密碼，將您的MySQL root 密碼替換原本的密碼

   ```
   # mysqldump -u root -pmysql_password cloud > cloud-backup.dmp
                          # mysqldump -u root -pmysql_password cloud_usage > cloud-usage-backup.dmp
   ```

5. 不管是在安裝指南中詳細的建立 RPM/DEB封包，還是使用任一論壇提供的 yum/apt repositories來存取 CloudStack binaries

6. If you are using Ubuntu, follow this procedure to upgrade your packages. If not, skip to step 7.

   

   Community Packages

   This section assumes you're using the community supplied packages for CloudStack. If you've created your own packages and APT repository, substitute your own URL for the ones used in these examples.

   a. The first order of business will be to change the sources list for each system with CloudStack packages. This means all management servers, and any hosts that have the KVM agent. (No changes should be necessary for hosts that are running VMware or Xen.)

      Start by opening /etc/apt/sources.list.d/cloudstack.list on any systems that have CloudStack packages installed.

      This file should have one line, which contains:

      ```
      deb http://cloudstack.apt-get.eu/ubuntu precise 4.0
      ```

      We'll change it to point to the new package repository:

      ```
      deb http://cloudstack.apt-get.eu/ubuntu precise 4.1
      ```

      If you're using your own package repository, change this line to read as appropriate for your 4.1.0 repository.

   b. Now update your apt package list:

      ```
      $ sudo apt-get update
      ```

   c. Now that you have the repository configured, it's time to install the cloudstack-management package. This will pull in any other dependencies you need.

      ```
      $ sudo apt-get install cloudstack-management
      ```

   d. You will need to manually install the cloudstack-agent package:

```
$ sudo apt-get install cloudstack-agent
```

During the installation of cloudstack-agent, APT will copy your agent.properties, log4j-cloud.xml, and environment.properties from /etc/cloud/agent to /etc/cloudstack/agent.

When prompted whether you wish to keep your configuration, say Yes.

e. Verify that the file /etc/cloudstack/agent/environment.properties has a line that reads:

```
paths.script=/usr/share/cloudstack-common
```

If not, add the line.

f. Restart the agent:

```
service cloud-agent stop
killall jsvc
service cloudstack-agent start
```

g. During the upgrade, log4j-cloud.xml was simply copied over, so the logs will continue to be added to /var/log/cloud/agent/agent.log. There's nothing wrong with this, but if you prefer to be consistent, you can change this by copying over the sample configuration file:

```
cd /etc/cloudstack/agent
mv log4j-cloud.xml.dpkg-dist log4j-cloud.xml
service cloudstack-agent restart
```

h. Once the agent is running, you can uninstall the old cloud-* packages from your system:

```
sudo dpkg --purge cloud-agent
```

7. If you are using CentOS or RHEL, follow this procedure to upgrade your packages. If not, skip to step 8.

Community Packages

This section assumes you're using the community supplied packages for CloudStack. If you've created your own packages and yum repository, substitute your own URL for the ones used in these examples.

a. The first order of business will be to change the yum repository for each system with CloudStack packages. This means all management servers, and any hosts that

have the KVM agent. (No changes should be necessary for hosts that are running VMware or Xen.)

Start by opening /etc/yum.repos.d/cloudstack.repo on any systems that have CloudStack packages installed.

This file should have content similar to the following:

```
[apache-cloudstack]
name=Apache CloudStack
baseurl=http://cloudstack.apt-get.eu/rhel/4.0/
enabled=1
gpgcheck=0
```

If you are using the community provided package repository, change the baseurl to http://cloudstack.apt-get.eu/rhel/4.1/

If you're using your own package repository, change this line to read as appropriate for your 4.1.0 repository.

b. Now that you have the repository configured, it's time to install the cloudstack-management package by upgrading the older cloud-client package.

```
$ sudo yum upgrade cloud-client
```

c. For KVM hosts, you will need to upgrade the cloud-agent package, similarly installing the new version as cloudstack-agent.

```
$ sudo yum upgrade cloud-agent
```

During the installation of cloudstack-agent, the RPM will copy your agent.properties, log4j-cloud.xml, and environment.properties from /etc/cloud/agent to /etc/cloudstack/agent.

d. Verify that the file /etc/cloudstack/agent/environment.properties has a line that reads:

```
paths.script=/usr/share/cloudstack-common
```

If not, add the line.

e. Restart the agent:

```
service cloud-agent stop
killall jsvc
service cloudstack-agent start
```

8. If you have made changes to your copy of /etc/cloud/management/components.xml the changes will be preserved in the upgrade. However, you need to do the following steps to place these changes in a new version of the file which is compatible with version 4.1.0.

a. 備份/etc/cloud/management/components.xml拷貝, 例如:

```
# mv /etc/cloud/management/components.xml /etc/cloud/management/components.xml-backup
```

b. 複製 /etc/cloud/management/components.xml.rpmnew 來建立新的 /etc/cloud/management/components.xml:

```
# cp -ap /etc/cloud/management/components.xml.rpmnew /etc/cloud/management/components.xml
```

c. 合併您從備份檔案的變更到新的

```
# vi /etc/cloud/management/components.xml
```

注意

如果您有數個管理伺服器節點，在每個節點重複以上步驟

9. After upgrading to 4.1, API clients are expected to send plain text passwords for login and user creation, instead of MD5 hash. Incase, api client changes are not acceptable, following changes are to be made for backward compatibility:

   Modify componentsContext.xml, and make PlainTextUserAuthenticator as the default authenticator (1st entry in the userAuthenticators adapter list is default)

```
<!-- Security adapters -->
<bean id="userAuthenticators" class="com.cloud.utils.component.AdapterList">
  <property name="Adapters">
    <list>
      <ref bean="PlainTextUserAuthenticator"/>
      <ref bean="MD5UserAuthenticator"/>
      <ref bean="LDAPUserAuthenticator"/>
    </list>
  </property>
</bean>
```

   PlainTextUserAuthenticator works the same way MD5UserAuthenticator worked prior to 4.1.

10. 開始第一個Management Server，請不要啓動其他的Management Server

```
# service cloudstack-management start
```

等待資料庫更新完畢。確定後，每次啓動一個Management Servers，並執行同樣的步驟

注意

如果不能重新啓動Management Server，表示更新時有問題，反之即表示更新成功

11. 啓動所有Usage Servers(如果它們正在執行前一版本)，執行這步到每個Usage Servers主機:

    ```
    # service cloudstack-usage start
    ```

12. 

    注意

    每個KVM主機需要額外的步驟，這些步驟不會影響正在雲端執行的訪客。注意，這些步驟僅限使用KVM的主機

    a. 在安裝指南將Yum或包含CloudStack封包的apt respository設定為外形

    b. 停止正在執行的agent

    ```
    # service cloud-agent stop
    ```

    c. 用以下適合您系統的指令更新 agent軟體

    ```
    # yum update cloud-*
    ```

    ```
    # apt-get update
    ```

    ```
    # apt-get upgrade cloud-*
    ```

    d. 啓動agent

    ```
    # service cloudstack-agent start
    ```

    e. 編輯/etc/cloud/agent/agent.properties將資源參數由 "com.cloud.agent.resource.computing.LibvirtComputingResource"改為 "com.cloud.hypervisor.kvm.resource.LibvirtComputingResource".

    f. 啓動雲端agent及雲端管理服務

    g. 當 Management Server開始執行，登入 CloudStack使用者介面，並重新啓動虛擬路由器，以便運行所有功能

13. 以管理者登入CloudStack使用者介面，並檢查主機的狀態，所有主機應該都會在Up(除了您知道是離線的)，您會需要等待20到30分鐘，取決於主機的數量

    

    注意

    疑難雜症：如果登入失敗，請清除您的瀏覽快取，再重載此葉面

    請不要執行下一步，如果主機不是在Up

14. 如果您是從3.0.2升級，請執行以下步驟:

    a. 確保管理埠是設為8096，請用 "integration.api.port"總體參數

這個埠會在更新的最後被cloud-sysvmadm script使用。關於如何設定這個參數，詳見安裝指南的"Setting Global Configuration Parameters"

b. 重新啓動 Management Server

注意

如果您不想管理埠保持開啓，您可以在更新完成後，將它設為null，再重新啓動管理伺服器

15. 執行cloud-sysvmadm script來停止，之後啓動所有Secondary Storage VMs，Console Proxy VMs和虛擬路由器。在每個管理伺服器執行一次，替換您的IP到MySQL、要連結的MySQL 使用者及該使用者的密碼，除了這些參數，提供-c 和 -r變數，例如:

```
# nohup cloud-sysvmadm -d 192.168.1.5 -u cloud -p password -c -r > sysvm.log 2>&1 &

# tail -f sysvm.log
```

這可能會花一小時以上的時間來執行，取決於系統的帳戶數量

16. If needed, upgrade all Citrix XenServer hypervisor hosts in your cloud to a version supported by CloudStack 4.1.0. The supported versions are XenServer 5.6 SP2 and 6.0.2. Instructions for upgrade can be found in the CloudStack 4.1.0 Installation Guide under "Upgrading XenServer Versions."

17. 現在套用 XenServer hotfix XS602E003 (和其他需要的 hotfixes) to XenServer v6.0.2到超級監督者主機

a. 從CloudStack切斷XenServer cluster的連線

在CloudStack使用者介面左方的導覽視窗，選擇Infrastructure。在Clusters下，選擇View All ，之後選擇XenServer cluster然後按下 Actions - Unmanage

如果您的主機不在Up，Down，Disconnected,或 Alert其中一個狀態，可能會失敗。您會需要在取消管理cluster前修正

等到cluster進入Unmanaged，使用CloudStack使用者介面來檢查狀態，此狀態的cluster沒有任何對主機的連結

b. 要清除VLAN，登入 XenServer主機並執行:

```
/opt/xensource/bin/cloud-clean-vlan.sh
```

c. 執行以下指令準備更新:

```
/opt/xensource/bin/cloud-prepare-upgrade.sh
```

如果您看到像"can't eject CD"的訊息，登入VM並卸載CD，再重新執行一次

d. 上傳hotfix到 XenServer主機，請總是先啓動Xen pool master，再啓動slaves。使用您常用的複製檔案工具(例如WinSCP)將hotfixes 複製到主機，將它們放在暫時的資料夾，像是/tmp

在Xen pool master，用以下指令上傳:

```
xe patch-upload file-name=XS602E003.xsupdate
```

記下執行結果，它會是hotfix檔案的UUID，您會在之後的步驟使用

注意

(選擇性)如果您正套用其他hotfixes，您可以用適當的hotfix number來重複這章的指令，例如，XS602E004.xsupdate

e. 手動將所有VM移到另一個主機上。首先先取得這台主機的VM清單：

```
# xe vm-list
```

用這組指令來搬移所有VM，並將主機名稱及VM名稱換成您自己的：

```
# xe vm-migrate live=true host=host-name vm=VM-name
```

疑難雜症

如果您看到像"You attempted an operation on a VM which requires PV drivers to be installed but the drivers were not detected,"的訊息，請執行：

```
/opt/xensource/bin/make_migratable.sh b6cf79c8-02ee-050b-922f-49583d9f1a14.
```

f. 要套用hotfix，請先取得主機的UUID：

```
# xe host-list
```

使用以下指令來套用hotfix，將現在的主機ID取代範例的主機UUID，以及用您之前記下的UUID來取代hotfix UUID，您也可以執行xe patch-list來取得hotfix UUID

```
xe patch-apply host-uuid=host-uuid uuid=hotfix-uuid
```

g. 從CloudStack Management Server複製以下檔案到主機

Copy from here...	...to here
/usr/lib64/cloud/common/scripts/vm/hypervisor/xenserver/xenserver60/NFSSR.py	/opt/xensource/sm/NFSSR.py
/usr/lib64/cloud/common/scripts/vm/hypervisor/xenserver/setupxenserver.sh	/opt/xensource/bin/setupxenserver.sh

Copy from here...	...to here
/usr/lib64/cloud/common/scripts/vm/hypervisor/xenserver/make_migratable.sh	/opt/xensource/bin/make_migratable.sh

h. (僅限 hotfixes XS602E005 和 XS602E007)您需要套用新的Cloud Support Pack

- 從以下其中一個連結下載CSP軟體到XenServer 主機:

  從 hotfix XS602E005: http://coltrane.eng.hq.xensource.com/release/XenServer-6.x/XS-6.0.2/hotfixes/XS602E005/56710/xe-phase-2/xenserver-cloud-supp.tgz

  從 hotfix XS602E007: http://coltrane.eng.hq.xensource.com/release/XenServer-6.x/XS-6.0.2/hotfixes/XS602E007/57824/xe-phase-2/xenserver-cloud-supp.tgz

- 解壓縮檔案:

```
# tar xf xenserver-cloud-supp.tgz
```

- 執行以下程式碼:

```
# xe-install-supplemental-pack xenserver-cloud-supp.iso
```

- 如果 XenServer 主機是使用基礎網路的zone的一部分, 關閉Open vSwitch (OVS):

```
# xe-switch-network-backend  bridge
```

i. 重新啓動 XenServer主機

j. 執行以下:

```
/opt/xensource/bin/setupxenserver.sh
```

注意

如果出現 "mv: cannot stat `/etc/cron.daily/logrotate': No such file or directory"訊息, 您可以放心忽略

k. 執行以下:

```
for pbd in `xe pbd-list currently-attached=false| grep ^uuid | awk '{print $NF}'`; do xe pbd-plug
 uuid=$pbd ;
```

l. 在 Xen pool的每個隸屬主機, 重複這些步驟, 從"manually live migrate VMs."開始

疑難雜症訣竅

如果原本能用的密碼在更新後失效，或是其他使用者介面出現問題，請嘗試清除瀏覽快取並重新讀取此葉面

4.3. Upgrade from 2.2.14 to 4.1.0

1. 請確認過您已查詢過IP位址資訊及紀錄。例如：您是否已經收到任何付費資訊。

   Starting in 3.0.2, the usage record format for IP addresses is the same as the rest of the usage types. Instead of a single record with the assignment and release dates, separate records are generated per aggregation period with start and end dates. After upgrading to 4.1.0, any existing IP address usage records in the old format will no longer be available.

2. If you are using version 2.2.0 - 2.2.13, first upgrade to 2.2.14 by using the instructions in the 2.2.14 Release Notes[2].

   

   KVM 主機

   If KVM hypervisor is used in your cloud, be sure you completed the step to insert a valid username and password into the host_details table on each KVM node as described in the 2.2.14 Release Notes. This step is critical, as the database will be encrypted after the upgrade to 4.1.0.

3. 當您正在執行2.2.14版本系統，請以root登入使用者介面

4. 利用使用者介面來新增System VM模組給您在雲端及zone中的每個超級監督者型態

   a. 在左邊的導覽視窗，選擇Templates

   b. 在Select視窗選擇Templates

   c. 選擇 Register template

      會顯示 Register template對話框

   d. 在 Register template對話框指定以下取決於超級監督者型態的數值(不會改變)：

超級監督者	敘述
XenServer	Name: systemvm-xenserver-3.0.0 Description: systemvm-xenserver-3.0.0

[2] http://download.cloud.com/releases/2.2.0/CloudStack2.2.14ReleaseNotes.pdf

超級監督者	敘述
	URL: http://download.cloud.com/templates/acton/acton-systemvm-02062012.vhd.bz2 Zone: 選擇超級監督者使用的zone 超級監督者: 格式: VHD 作業系統: Debian GNU/Linux 5.0 (32-bit) 可選取: no 啓用密碼: no 公開: no Featured: no
KVM	Name: systemvm-kvm-3.0.0 Description: systemvm-kvm-3.0.0 URL: http://download.cloud.com/templates/acton/acton-systemvm-02062012.qcow2.bz2 Zone: 選擇超級監督者使用的zone 超級監督者: KVM 格式: QCOW2 作業系統: Debian GNU/Linux 5.0 (32-bit) 可選取: no 啓用密碼: no 公開: no Featured: no
VMware	Name: systemvm-vmware-4.0 Description: systemvm-vmware-4.0 URL: http://download.cloud.com/templates/burbank/burbank-systemvm-08012012.ova Zone: 選擇超級監督者使用的zone 超級監督者: VMware 格式: OVA 作業系統: Debian GNU/Linux 5.0 (32-bit) 可選取: no

超級監督者	敘述
	啓用密碼：no 公開：no Featured：no

5. 請確定模組下載成功，然後進入 READY 狀態，請不要繼續如果此步驟還未成功
6. WARNING：如果您使用多種超級監督者型態，請確定您已經重複這些步驟，否則升級會失敗
7. 將所有主機上的所有Usage Servers停止

```
# service cloud-usage stop
```

8. 停止所有主機的所有Management Servers

```
# service cloud-management stop
```

9. 我們建議，即使在測試更新階段，先用MySQL master備份MySQL資料庫，如果出現問題，備份能夠幫助除錯

   以下指令是假設您已經在資料庫上設定root的密碼，將您的MySQL root 密碼替換原本的密碼

```
# mysqldump -u root -pmysql_password cloud > cloud-backup.dmp
                        # mysqldump -u root -pmysql_password cloud_usage > cloud-usage-backup.dmp
```

10. 不管是在安裝指南中詳細的建立 RPM/DEB封包，還是使用任一論壇提供的 yum/apt repositories來存取 CloudStack binaries
11. If you are using Ubuntu, follow this procedure to upgrade your packages. If not, skip to step 12.

Community Packages

This section assumes you're using the community supplied packages for CloudStack. If you've created your own packages and APT repository, substitute your own URL for the ones used in these examples.

    a. The first order of business will be to change the sources list for each system with CloudStack packages. This means all management servers, and any hosts that have the KVM agent. (No changes should be necessary for hosts that are running VMware or Xen.)

       Start by opening /etc/apt/sources.list.d/cloudstack.list on any systems that have CloudStack packages installed.

       This file should have one line, which contains:

```
deb http://cloudstack.apt-get.eu/ubuntu precise 4.0
```

We'll change it to point to the new package repository:

```
deb http://cloudstack.apt-get.eu/ubuntu precise 4.1
```

If you're using your own package repository, change this line to read as appropriate for your 4.1.0 repository.

b. Now update your apt package list:

```
$ sudo apt-get update
```

c. Now that you have the repository configured, it's time to install the cloudstack-management package. This will pull in any other dependencies you need.

```
$ sudo apt-get install cloudstack-management
```

d. You will need to manually install the cloudstack-agent package:

```
$ sudo apt-get install cloudstack-agent
```

During the installation of cloudstack-agent, APT will copy your agent.properties, log4j-cloud.xml, and environment.properties from /etc/cloud/agent to /etc/cloudstack/agent.

When prompted whether you wish to keep your configuration, say Yes.

e. Verify that the file /etc/cloudstack/agent/environment.properties has a line that reads:

```
paths.script=/usr/share/cloudstack-common
```

If not, add the line.

f. Restart the agent:

```
service cloud-agent stop
killall jsvc
service cloudstack-agent start
```

g. During the upgrade, log4j-cloud.xml was simply copied over, so the logs will continue to be added to /var/log/cloud/agent/agent.log. There's nothing wrong with this, but if you prefer to be consistent, you can change this by copying over the sample configuration file:

```
cd /etc/cloudstack/agent
mv log4j-cloud.xml.dpkg-dist log4j-cloud.xml
service cloudstack-agent restart
```

h. Once the agent is running, you can uninstall the old cloud-* packages from your system:

```
sudo dpkg --purge cloud-agent
```

12. If you are using CentOS or RHEL, follow this procedure to upgrade your packages. If not, skip to step 13.

Community Packages

This section assumes you're using the community supplied packages for CloudStack. If you've created your own packages and yum repository, substitute your own URL for the ones used in these examples.

a. The first order of business will be to change the yum repository for each system with CloudStack packages. This means all management servers, and any hosts that have the KVM agent. (No changes should be necessary for hosts that are running VMware or Xen.)

Start by opening /etc/yum.repos.d/cloudstack.repo on any systems that have CloudStack packages installed.

This file should have content similar to the following:

```
[apache-cloudstack]
name=Apache CloudStack
baseurl=http://cloudstack.apt-get.eu/rhel/4.0/
enabled=1
gpgcheck=0
```

If you are using the community provided package repository, change the baseurl to http://cloudstack.apt-get.eu/rhel/4.1/

If you're using your own package repository, change this line to read as appropriate for your 4.1.0 repository.

b. Now that you have the repository configured, it's time to install the cloudstack-management package by upgrading the older cloud-client package.

```
$ sudo yum upgrade cloud-client
```

c. For KVM hosts, you will need to upgrade the cloud-agent package, similarly installing the new version as cloudstack-agent.

```
$ sudo yum upgrade cloud-agent
```

During the installation of cloudstack-agent, the RPM will copy your agent.properties, log4j-cloud.xml, and environment.properties from /etc/cloud/agent to /etc/cloudstack/agent.

d. Verify that the file /etc/cloudstack/agent/environment.properties has a line that reads:

```
paths.script=/usr/share/cloudstack-common
```

If not, add the line.

e. Restart the agent:

```
service cloud-agent stop
killall jsvc
service cloudstack-agent start
```

13. 如果您有改變前一版本的檔案components.xml拷貝，這個改變會被保存到更新裡。然而，您需要執行以下步驟來將新版本的檔案與4.0.0-incubating版本相容

注意

您要如何知道使否需要? 如果安裝結果包含了以下訊息,

```
注意: /etc/cloud/management/components.xml 改成/etc/cloud/management/components.xml.rpmnew
```

a. 備份/etc/cloud/management/components.xml 拷貝，例如:

```
# mv /etc/cloud/management/components.xml /etc/cloud/management/components.xml-backup
```

b. 複製 /etc/cloud/management/components.xml.rpmnew 來建立新的 /etc/cloud/management/components.xml:

```
# cp -ap /etc/cloud/management/components.xml.rpmnew /etc/cloud/management/components.xml
```

c. 合併您從備份檔案的變更到新的components.xml檔案

```
# vi /etc/cloud/management/components.xml
```

14. After upgrading to 4.1, API clients are expected to send plain text passwords for login and user creation, instead of MD5 hash. Incase, api client changes are not acceptable, following changes are to be made for backward compatibility:

Modify componentsContext.xml, and make PlainTextUserAuthenticator as the default authenticator (1st entry in the userAuthenticators adapter list is default)

```
<!-- Security adapters -->
<bean id="userAuthenticators" class="com.cloud.utils.component.AdapterList">
  <property name="Adapters">
    <list>
      <ref bean="PlainTextUserAuthenticator"/>
```

```
      <ref bean="MD5UserAuthenticator"/>
      <ref bean="LDAPUserAuthenticator"/>
    </list>
  </property>
</bean>
```

PlainTextUserAuthenticator works the same way MD5UserAuthenticator worked prior to 4.1.

15. 如果您有改變之前CloudStack安裝版本的/etc/cloud/management/db.properties拷貝，這個改變會被保存到更新裡。然而，您需要執行以下步驟來將新版本的檔案與4.0.0-incubating版本相容

    a. 備份/etc/cloud/management/db.properties 拷貝，例如：

    ```
    # mv /etc/cloud/management/db.properties /etc/cloud/management/db.properties-backup
    ```

    b. 複製 /etc/cloud/management/db.properties.rpmnew 來建立新的 /etc/cloud/management/db.properties：

    ```
    # cp -ap /etc/cloud/management/db.properties.rpmnew etc/cloud/management/db.properties
    ```

    c. 合併您從備份檔案的變更到新的db.properties檔案

    ```
    # vi /etc/cloud/management/db.properties
    ```

16. 在管理伺服器節點，執行以下指令，我們推薦您使用 command-line flags來提供您的編碼金鑰，參見

    ```
    # cloud-setup-encryption -e encryption_type -m management_server_key -k database_key
    ```

    如以下例子不使用變數，則會用預設的編碼形式與金鑰：

    - (選擇性)對於encryption_type，您可以使用文件或網路來指定通過資料庫密碼的技術，預設為：文件
    - (選擇性)對於management_server_key，替換在properties file用來編譯機密參數的預設金鑰，預設：password。我們强烈建議您替換成更安全的數值
    - (選擇性)對於database_key，替換在CloudStack資料庫用來編譯機密參數的預設金鑰，預設：password。我們强烈建議您替換成更安全的數值

17. 在管理伺服器節點重複步驟10 - 14，如果您在步驟14提供了自己的編碼金鑰，請使用同樣的金鑰在其他管理伺服器

18. 開始第一個Management Server，請不要啓動其他的Management Server

    ```
    # service cloudstack-management start
    ```

    等待資料庫更新完畢，您應該會看見訊息。確定後，每次啓動一個Management Servers，並執行同樣的步驟

19. 啓動所有Usage Servers(如果它們正在執行前一版本)，執行這步到每個Usage Servers主機：

    ```
    # service cloudstack-usage start
    ```

20. (僅限KVM)每個KVM主機需要額外的步驟，這些步驟不會影響正在雲端執行的訪客。注意，這些步驟僅限使用KVM的主機

    a. 根據安裝指南設定您的 CloudStack封包容器為外型

    b. 停止正在執行的agent

    ```
    # service cloud-agent stop
    ```

    c. 用以下適合您系統的指令更新 agent軟體

    ```
    # yum update cloud-*
    ```

    ```
    # apt-get update
    # apt-get upgrade cloud-*
    ```

    d. 啓動agent

    ```
    # service cloudstack-agent start
    ```

    e. 使用以下指令複製 agent.properties 文件內容到新的 agent.properties 文件

    ```
    sed -i 's/com.cloud.agent.resource.computing.LibvirtComputingResource/
    com.cloud.hypervisor.kvm.resource.LibvirtComputingResource/g' /etc/cloud/agent/agent.properties
    ```

    f. 啓動雲端agent及雲端管理服務

    g. 當 Management Server開始執行，登入 CloudStack使用者介面，並重新啓動虛擬路由器，以便運行所有功能

21. 以管理者登入CloudStack使用者介面，並檢查主機的狀態，所有主機應該都會在Up(除了您知道是離線的)，您會需要等待20到30分鐘，取決於主機的數量

    請不要執行下一步，如果主機不是在Up。如果主機不再Up，請聯絡客服人員

22. 執行以下程式碼來停止，然後開始所有Secondary Storage VMs，Console Proxy VMs，及虛擬路由器

    a. 在每個管理伺服器執行一次指令，替換您的IP到MySQL、要連結的MySQL 使用者及該使用者的密碼，除了這些參數，提供-c 和 -r變數，例如:

    ```
    # nohup cloud-sysvmadm -d 192.168.1.5 -u cloud -p password -c -r > sysvm.log 2>&1 &
    # tail -f sysvm.log
    ```

    這可能會花一小時以上的時間來執行，取決於系統的帳戶數量

    b. 執行完成後，檢查紀錄已確定有正確執行:

    ```
    # tail -f sysvm.log
    ```

    內容應該會如下:

```
                                Stopping and starting 1 secondary storage vm(s)...
                                Done stopping and starting secondary storage vm(s)
                                Stopping and starting 1 console proxy vm(s)...
                                Done stopping and starting console proxy vm(s).
                                Stopping and starting 4 running routing vm(s)...
                                Done restarting router(s).
```

23. 如果您想要在系統VM重新開機後，進一步確認新的系統VM模組是否已被正確的套用。您可以SSH進系統VM，並檢查版本

    取決於超級監督者，使用以下其中一個技術：

    XenServer 或 KVM:

    藉由系統VM的本地IP位址，使用SSH。例如，在下面的指令中，將您之前登錄系統VM的私人金鑰路徑以及本地IP替換掉

    在XenServer 或 KVM 主機執行以下指令：

    ```
    # ssh -i private-key-path link-local-ip -p 3922
                            # cat /etc/cloudstack-release
    ```

    結果應該會如下：

    ```
    Cloudstack Release 4.0.0-incubating 星期一 10月9日 15:10:04 PST 2012
    ```

    ESXi

    藉由系統VM的本地IP位址，使用SSH。例如，在下面的指令中，將您之前登錄系統VM的私人金鑰路徑以及本地IP替換掉

    請在Management Server執行以下指令：

    ```
    # ssh -i private-key-path private-ip -p 3922
                            # cat /etc/cloudstack-release
    ```

    結果應該會如下：

    ```
    Cloudstack Release 4.0.0-incubating 星期一 10月9日 15:10:04 PST 2012
    ```

24. 如果需要，更新所有在雲端的Citrix XenServer超級監督者主機到支援CloudStack 4.0.0-incubating的版本，支援的版本為5.6 SP2 and 6.0.2，更新引導可以在CloudStack 4.0.0-incubating Installation Guide被找到

25. 套用 XenServer hotfix XS602E003（和其他需要的 hotfixes）to XenServer v6.0.2到超級監督者主機

    a. 從CloudStack切斷XenServer cluster的連線

       在CloudStack使用者介面左方的導覽視窗，選擇Infrastructure。在Clusters下，選擇View All ，之後選擇XenServer cluster然後按下 Actions - Unmanage

如果您的主機不在Up, Down, Disconnected,或 Alert其中一個狀態, 可能會失敗。您會需要在取消管理cluster前修正

等到cluster進入Unmanaged, 使用CloudStack使用者介面來檢查狀態, 此狀態的cluster沒有任何對主機的連結

b. 要清除VLAN, 登入 XenServer主機並執行:

```
/opt/xensource/bin/cloud-clean-vlan.sh
```

c. 執行以下指令準備更新:

```
/opt/xensource/bin/cloud-prepare-upgrade.sh
```

如果您看到像"can't eject CD"的訊息, 登入VM並卸載CD, 再重新執行一次

d. 上傳hotfix到 XenServer主機, 請總是先啓動Xen pool master, 再啓動slaves。使用您常用的複製檔案工具(例如WinSCP)將hotfixes 複製到主機, 將它們放在暫時的資料夾, 像是/tmp

在Xen pool master, 用以下指令上傳:

```
xe patch-upload file-name=XS602E003.xsupdate
```

記下執行結果, 它會是hotfix檔案的UUID, 您會在之後的步驟使用

注意

(選擇性)如果您正套用其他hotfixes, 您可以用適當的hotfix number來重複這章的指令, 例如, XS602E004.xsupdate

e. 手動將所有VM移到另一個主機上。首先先取得這台主機的VM清單:

```
# xe vm-list
```

用這組指令來搬移所有VM, 並將主機名稱及VM名稱換成您自己的:

```
# xe vm-migrate live=true host=host-name vm=VM-name
```

疑難雜症

如果您看到像"You attempted an operation on a VM which requires PV drivers to be installed but the drivers were not detected,"的訊息, 請執行:

/opt/xensource/bin/make_migratable.sh b6cf79c8-02ee-050b-922f-49583d9f1a14.

f. 要套用hotfix，請先取得主機的UUID：

```
# xe host-list
```

使用以下指令來套用hotfix，將現在的主機ID取代範例的主機UUID，以及用您之前記下的UUID來取代hotfix UUID，您也可以執行xe patch-list來取得hotfix UUID

```
xe patch-apply host-uuid=host-uuid uuid=hotfix-uuid
```

g. 從CloudStack Management Server複製以下檔案到主機

Copy from here...	...to here
/usr/lib64/cloud/common/scripts/vm/hypervisor/xenserver/xenserver60/NFSSR.py	/opt/xensource/sm/NFSSR.py
/usr/lib64/cloud/common/scripts/vm/hypervisor/xenserver/setupxenserver.sh	/opt/xensource/bin/setupxenserver.sh
/usr/lib64/cloud/common/scripts/vm/hypervisor/xenserver/make_migratable.sh	/opt/xensource/bin/make_migratable.sh

h. (僅限 hotfixes XS602E005 和 XS602E007)您需要套用新的Cloud Support Pack

- 從以下其中一個連結下載CSP軟體到XenServer 主機：

  從 hotfix XS602E005: http://coltrane.eng.hq.xensource.com/release/XenServer-6.x/XS-6.0.2/hotfixes/XS602E005/56710/xe-phase-2/xenserver-cloud-supp.tgz

  從 hotfix XS602E007: http://coltrane.eng.hq.xensource.com/release/XenServer-6.x/XS-6.0.2/hotfixes/XS602E007/57824/xe-phase-2/xenserver-cloud-supp.tgz

- 解壓縮檔案：

  ```
  # tar xf xenserver-cloud-supp.tgz
  ```

- 執行以下程式碼：

  ```
  # xe-install-supplemental-pack xenserver-cloud-supp.iso
  ```

- 如果 XenServer 主機是使用基礎網路的zone的一部分，關閉Open vSwitch (OVS)：

  ```
  # xe-switch-network-backend bridge
  ```

i. 重新啓動 XenServer主機

j. 執行以下：

```
/opt/xensource/bin/setupxenserver.sh
```

注意

如果出現 "mv: cannot stat `/etc/cron.daily/logrotate': No such file or directory"訊息，您可以放心忽略

k. 執行以下：

```
for pbd in `xe pbd-list currently-attached=false| grep ^uuid | awk '{print $NF}'`;
do xe pbd-plug uuid=$pbd ;
```

1. 在 Xen pool的每個隸屬主機，重複這些步驟，從"manually live migrate VMs."開始

API Changes in 4.1.0

5.1. New API commands in 4.1

- lockAccount (Locks an account)
- lockUser (Locks a user account)
- resetSSHKeyForVirtualMachine (Resets the SSH Key for virtual machine. The virtual machine must be in a "Stopped" state. [async])
- updatePortForwardingRule (Updates a port forwarding rule. Only the private port and the virtual machine can be updated.)
- createCounter (Adds metric counter)
- createCondition (Creates a condition)
- createAutoScalePolicy

  (Creates an autoscale policy for a provision or deprovision action, the action is taken when the all the conditions evaluates to true for the specified duration. The policy is in effect once it is attached to a autscale vm group.)
- createAutoScaleVmProfile

  (Creates a profile that contains information about the virtual machine which will be provisioned automatically by autoscale feature.)
- createAutoScaleVmGroup (Creates and automatically starts a virtual machine based on a service offering, disk offering, and template.)
- deleteCounter (Deletes a counter)
- deleteCondition (Removes a condition)
- deleteAutoScalePolicy (Deletes a autoscale policy.)
- deleteAutoScaleVmProfile (Deletes a autoscale vm profile.)
- deleteAutoScaleVmGroup (Deletes a autoscale vm group.)
- listCounters (List the counters)
- listConditions (List Conditions for the specific user)
- listAutoScalePolicies (Lists autoscale policies.)
- listAutoScaleVmProfiles (Lists autoscale vm profiles.)
- listAutoScaleVmGroups (Lists autoscale vm groups.)
- enableAutoScaleVmGroup (Enables an AutoScale Vm Group)
- disableAutoScaleVmGroup (Disables an AutoScale Vm Group)
- updateAutoScalePolicy (Updates an existing autoscale policy.)

- updateAutoScaleVmProfile (Updates an existing autoscale vm profile.)
- updateAutoScaleVmGroup (Updates an existing autoscale vm group.)
- addS3 (Adds S3)
- listS3s (Lists S3s)
- resizeVolume (Resizes a volume)
- addNicToVirtualMachine (Adds VM to specified network by creating a NIC)
- removeNicFromVirtualMachine (Removes VM from specified network by deleting a NIC)
- updateDefaultNicForVirtualMachine (Changes the default NIC on a VM)
- createEgressFirewallRule (Creates a egress firewall rule for a given network)
- deleteEgressFirewallRule (Deletes an ggress firewall rule)
- listEgressFirewallRules (Lists all egress firewall rules for network id.)
- addBigSwitchVnsDevice (Adds a BigSwitch VNS device)
- deleteBigSwitchVnsDevice (delete a bigswitch vns device)
- listBigSwitchVnsDevices (Lists BigSwitch Vns devices)
- listApis (lists all available apis on the server, provided by the Api Discovery plugin)
- getApiLimit (Get API limit count for the caller)
- resetApiLimit (Reset api count)
- addRegion (Adds a Region)
- updateRegion (Updates a region)
- removeRegion (Removes specified region)
- listRegions (Lists Regions)

5.2. Changed API commands in 4.1

5.2.1. Changes in command type (sync versus async)

- deleteNiciraNvpDevice became Async
- addNiciraNvpDevice became Async

5.2.2. Changes in command arguments

API Commands	Change Description
copyTemplate	New response parameters: sshkeyenabled
listRouters	New response parameters: ip6dns1, ip6dns2

API Commands	Change Description
listNiciraNvpDeviceNetworks	New response parameters: ip6cidr, ip6gateway, ispersistent
createVlanIpRange	New request parameters: endipv6 (optional), ip6cidr (optional), ip6gateway (optional), startipv6 (optional) Changed parameters: startip (old version - required, new version - optional) New response parameters: endipv6, ip6cidr, ip6gateway, startipv6
listNetworkOfferings	New response parameters: ispersistent
registerTemplate	New response parameters: sshkeyenabled
addTrafficMonitor	New request parameters: excludezones (optional), includezones (optional)
createAccount	New request parameters: accountid (optional), userid (optional) New response parameters: iscallerchilddomain
listTrafficMonitors	
registerSSHKeyPair	New response parameters: privatekey
createNetwork	New request parameters: endipv6 (optional), ip6cidr (optional), ip6gateway (optional), startipv6 (optional) New response parameters: ip6cidr, ip6gateway, ispersistent
getUser	New response parameters: iscallerchilddomain
stopRouter	New response parameters: ip6dns1, ip6dns2
listTemplates	New response parameters: sshkeyenabled
listNetworks	New response parameters: ip6cidr, ip6gateway, ispersistent
prepareTemplate	New response parameters: sshkeyenabled
changeServiceForRouter	New response parameters: ip6dns1, ip6dns2
updateZone	New request parameters: ip6dns1 (optional), ip6dns2 (optional) New response parameters: ip6dns1, ip6dns2
createSSHKeyPair	New response parameters: privatekey
listFirewallRules	New response parameters: networkid
updateUser	New response parameters: iscallerchilddomain
createZone	New request parameters: ip6dns1 (optional), ip6dns2 (optional)

API Commands	Change Description
	New response parameters: ip6dns1, ip6dns2
createStoragePool	Changed request parameters: podid (old version - optional, new version - required), clusterid (old version - optional, new version - required)
updateTemplate	New response parameters: sshkeyenabled
disableUser	New response parameters: iscallerchilddomain
listSSHKeyPairs	New response parameters: privatekey
listNiciraNvpDevices	New response parameters: hostname, l3gatewayserviceuuid, transportzoneuuid
registerIso	New response parameters: sshkeyenabled
listZones	New request parameters: name (optional) New response parameters: ip6dns1, ip6dns2
startRouter	New response parameters: ip6dns1, ip6dns2
listCapabilities	New response parameters: apilimitinterval, apilimitmax
deployVirtualMachine	New request parameters: ip6address (optional)
addVpnUser	New response parameters: state
destroyRouter	New response parameters: ip6dns1, ip6dns2
enableUser	New response parameters: iscallerchilddomain
addNiciraNvpDevice	New request parameters: l3gatewayserviceuuid (optional) New response parameters: hostname, l3gatewayserviceuuid, transportzoneuuid
createNetworkOffering	New request parameters: ispersistent (optional) New response parameters: ispersistent
copyIso	New response parameters: sshkeyenabled
createDomain	New request parameters: domainid (optional)
updateIso	New response parameters: sshkeyenabled
updateNetwork	New response parameters: ip6cidr, ip6gateway, ispersistent
rebootRouter	New response parameters: ip6dns1, ip6dns2
createFirewallRule	New response parameters: networkid
createUser	New request parameters: userid (optional) New response parameters: iscallerchilddomain

API Commands	Change Description
deleteUser	New response parameters: displaytext, success
listVlanIpRanges	New response parameters: endipv6, ip6cidr, ip6gateway, startipv6
updateNetworkOffering	New response parameters: ispersistent
listVpnUsers	New response parameters: state
listUsers	New response parameters: iscallerchilddomain
listIsos	New response parameters: sshkeyenabled